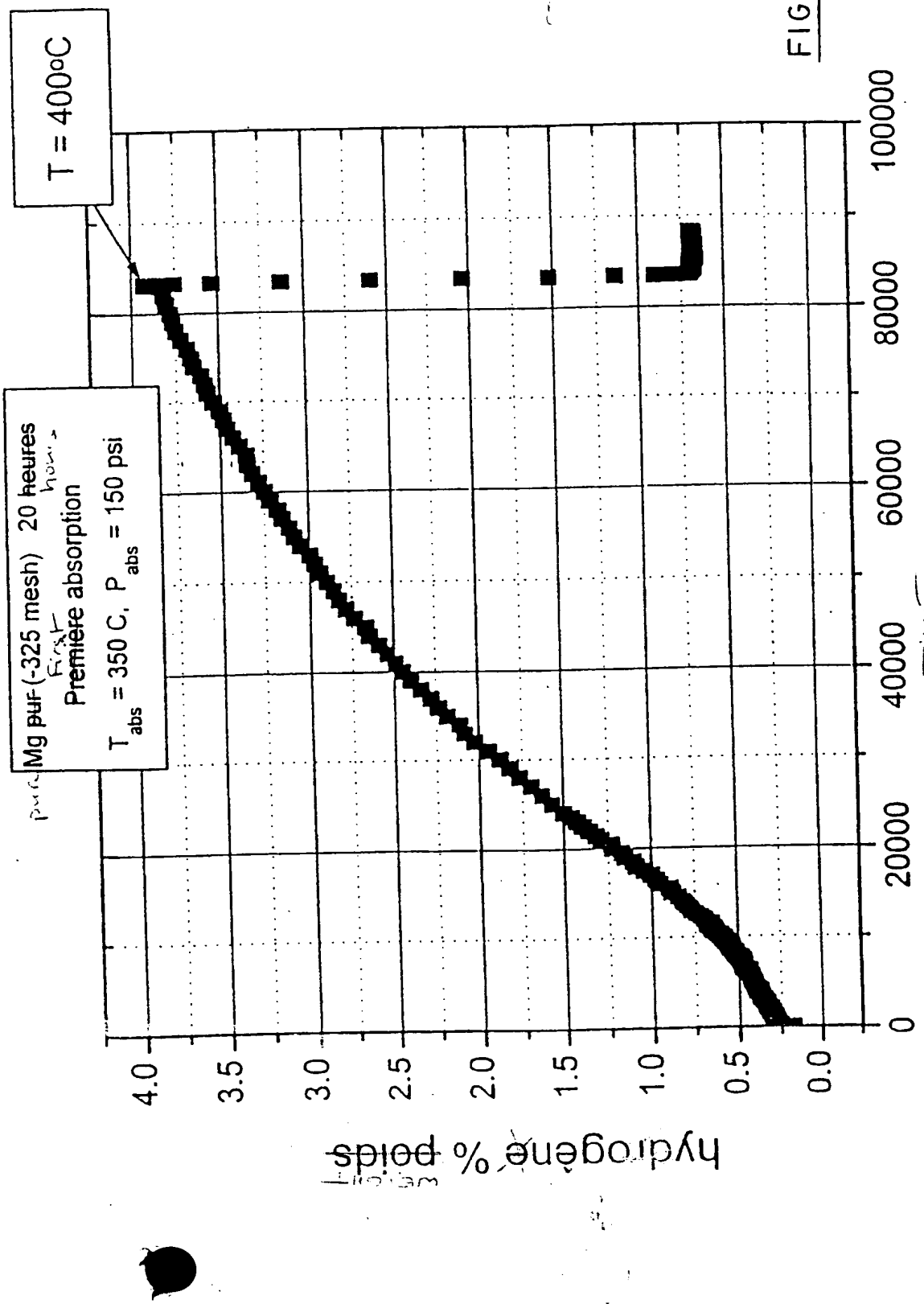

T = 400°C
Mg pur (-325 mesh) 20 heures
Première absorption
T_{abs} = 350 C, P_{abs} = 150 psi
Hydrogène % poids
Temps (sec)
TIME
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
0
20000
40000
60000
80000
100000

FIG. 1

FIG. 2

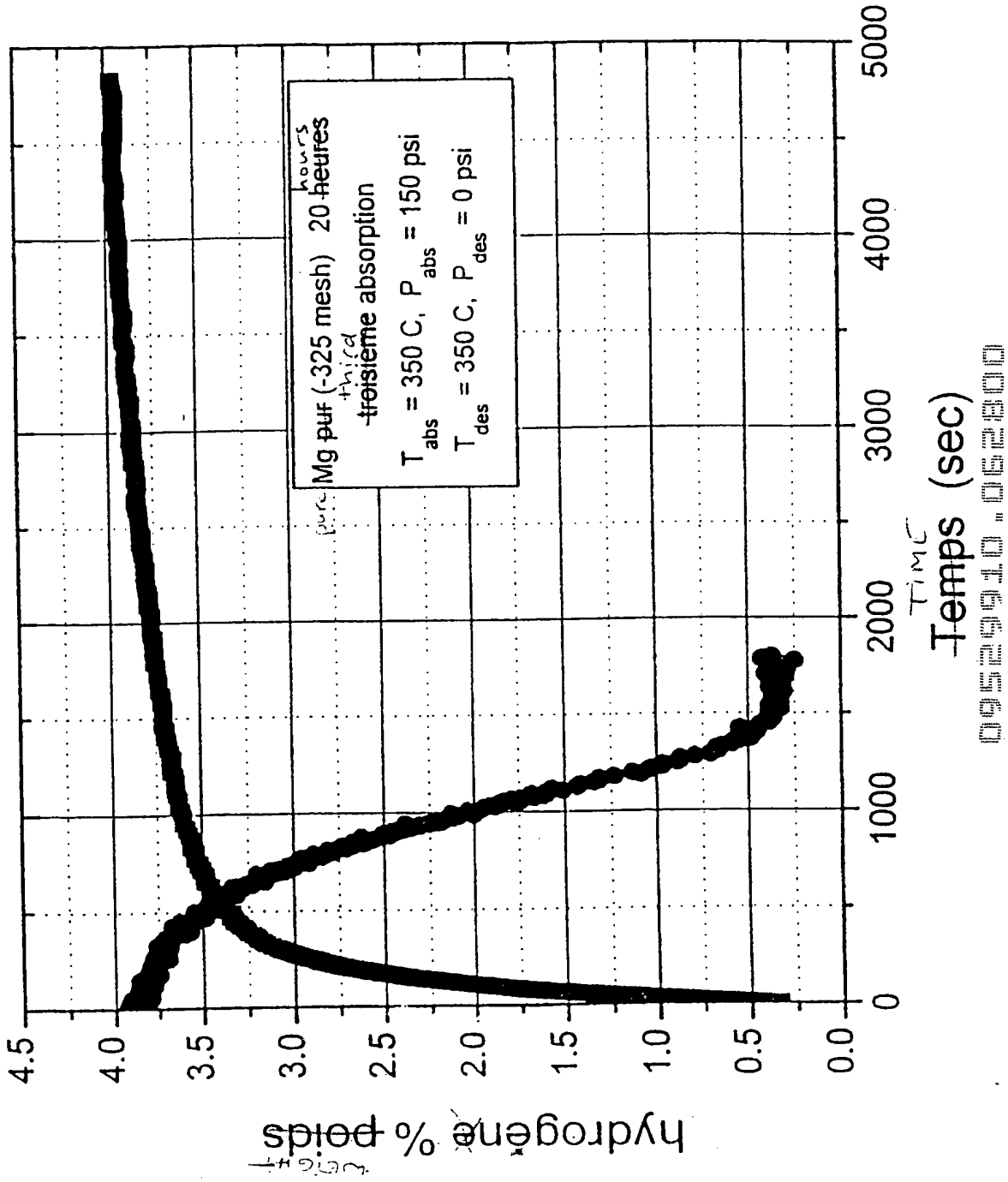
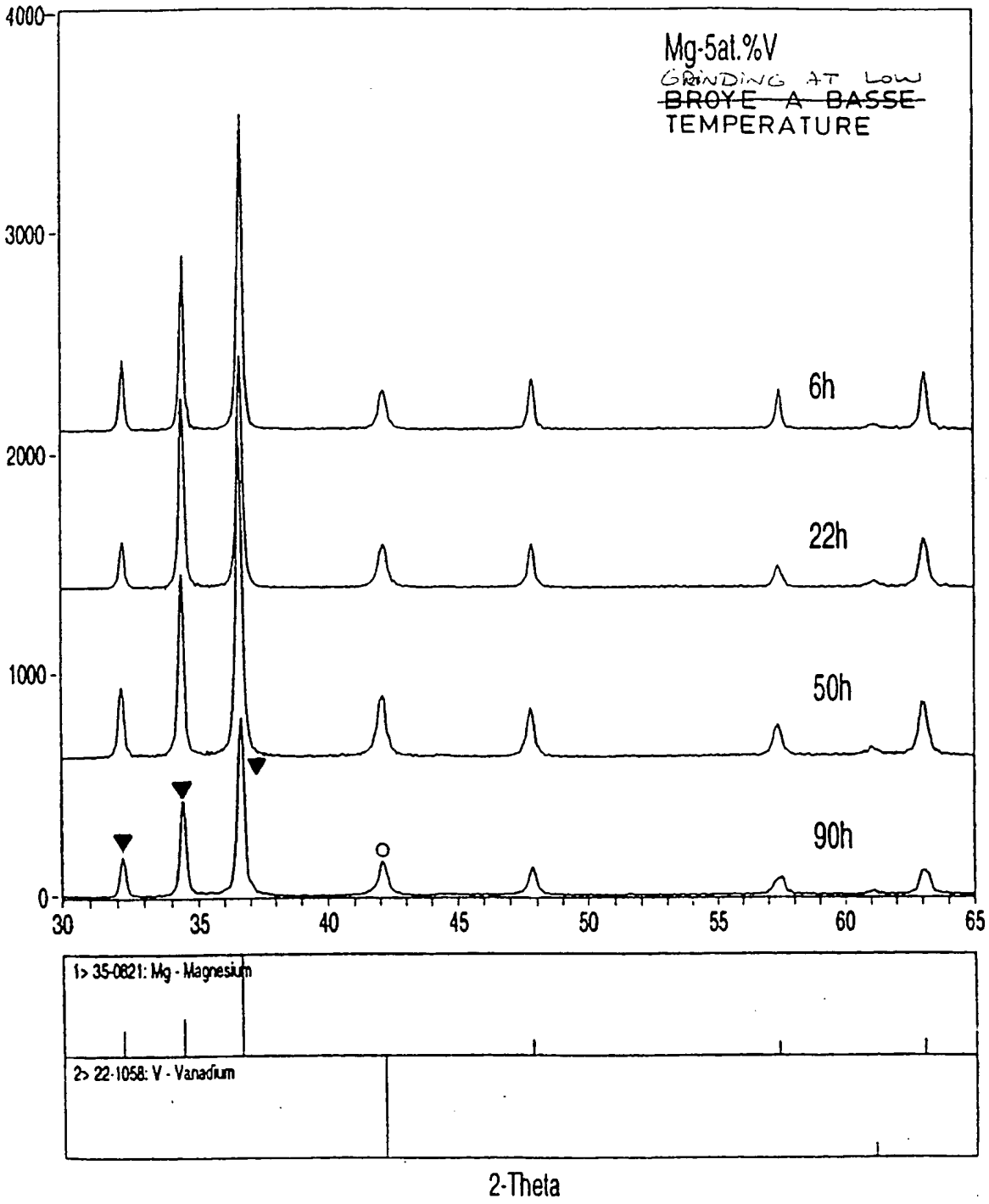

Mg pur (-325 mesh) 20 heures
troisième absorption
T_{abs} = 350 C, P_{abs} = 150 psi
T_{des} = 350 C, P_{des} = 0 psi
hydrogène % poids
Temps (sec)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
0
1000
2000
3000
4000
5000

FIG. 3


Mg-5at.%V
GRINDING AT LOW
~~BROYE A BASSE~~
TEMPERATURE
6h
22h
50h
90h
4000
3000
2000
1000
0
30
35
40
45
50
55
60
65
1> 35-0821: Mg - Magnesium
2> 22-1058: V - Vanadium
2-Theta

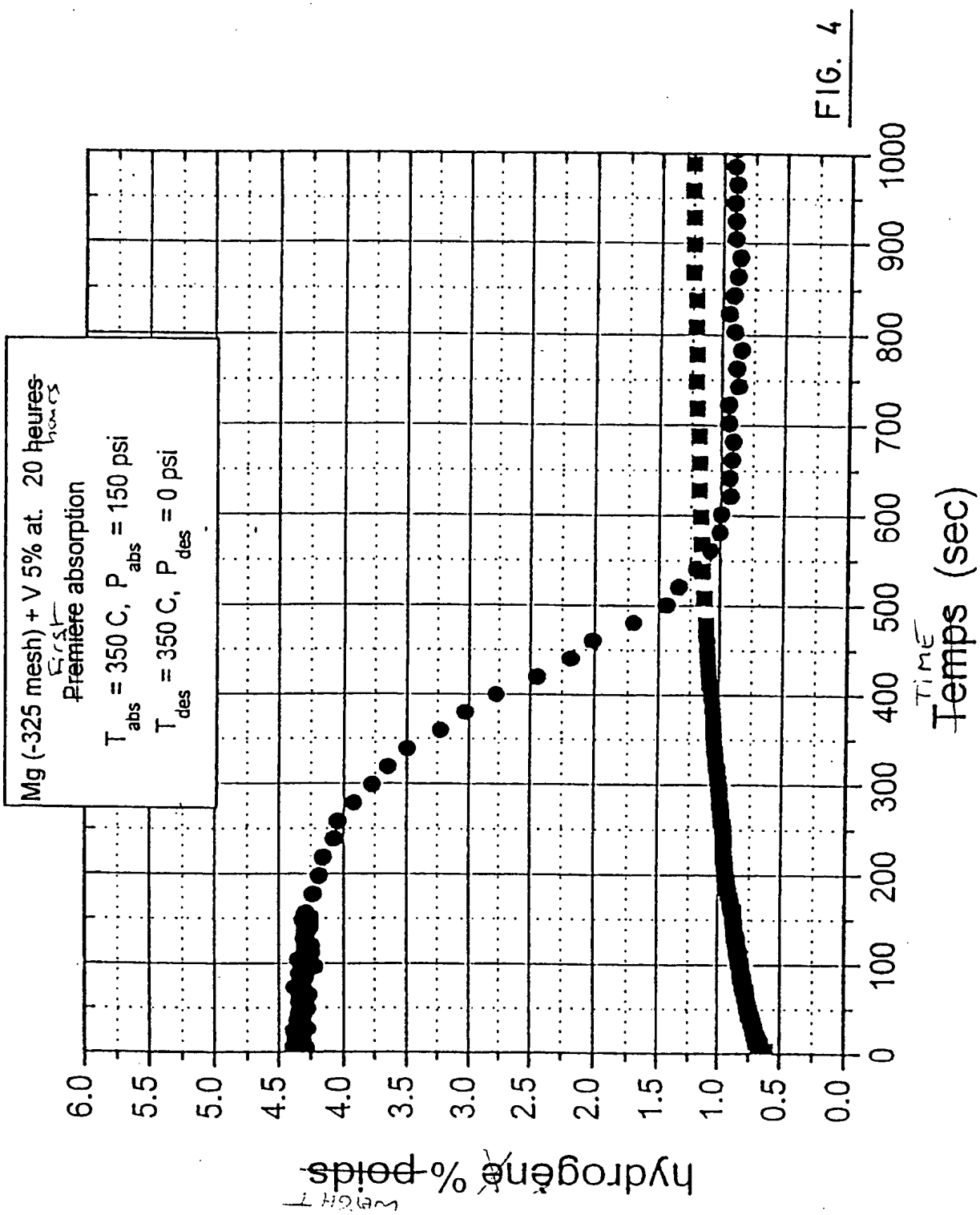


FIG. 4

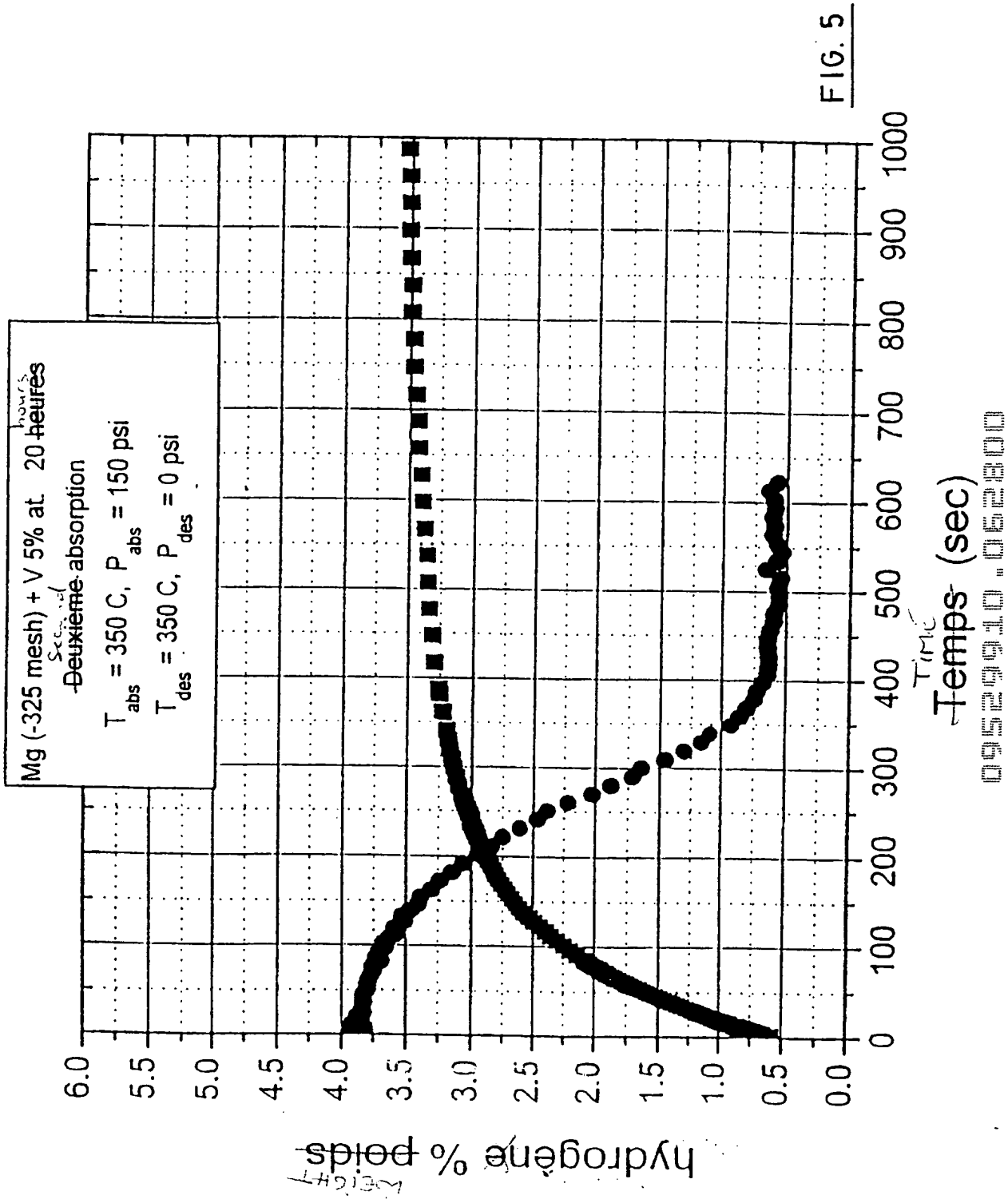

Mg (-325 mesh) + V 5% at 20 heures
Deuxième absorption
T_{abs} = 350 C, P_{abs} = 150 psi
T_{des} = 350 C, P_{des} = 0 psi
hydrogène % poids
Temps (sec)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
0
100
200
300
400
500
600
700
800
900
1000

FIG. 5

FIG. 6

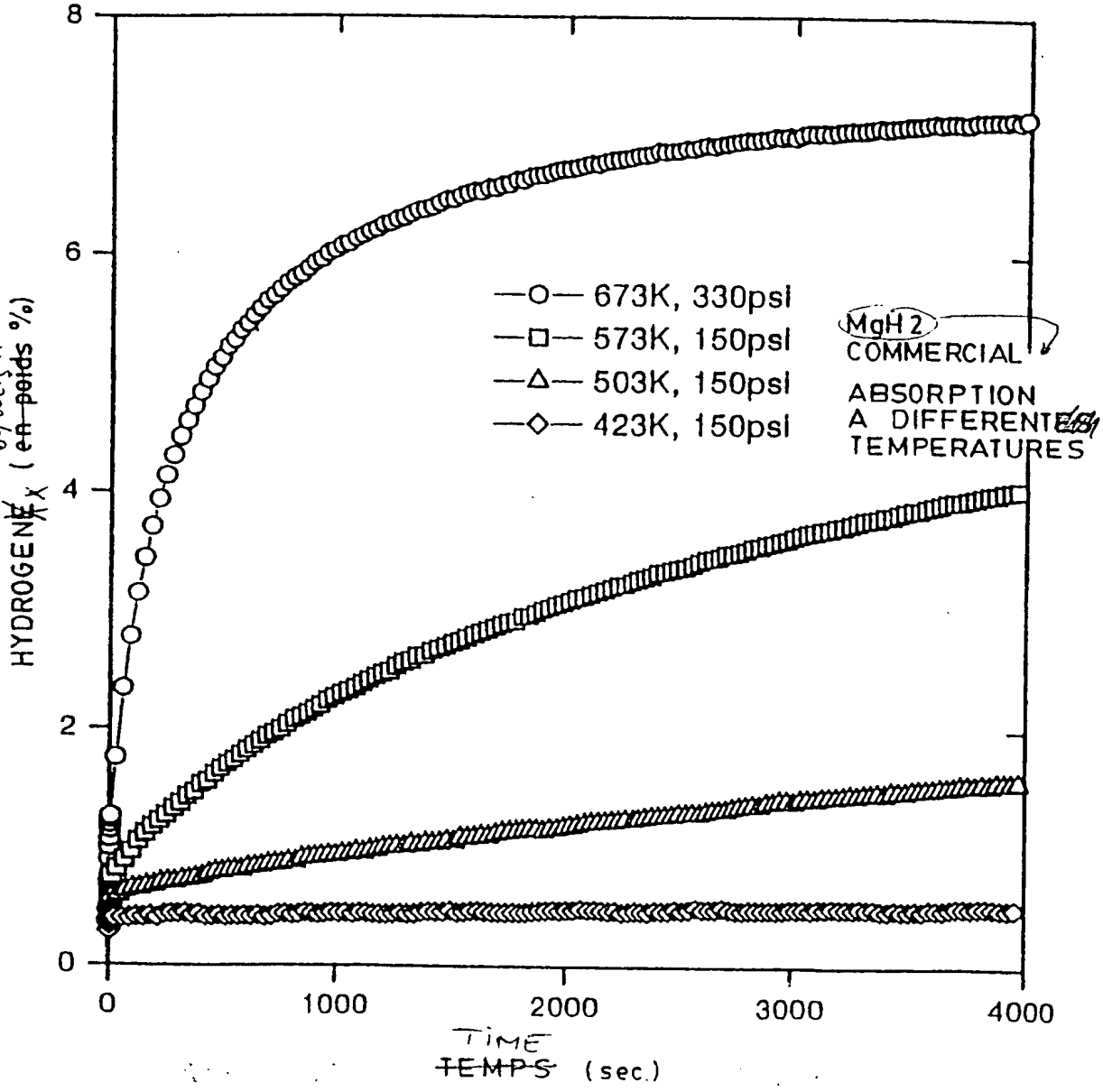


FIG. 7

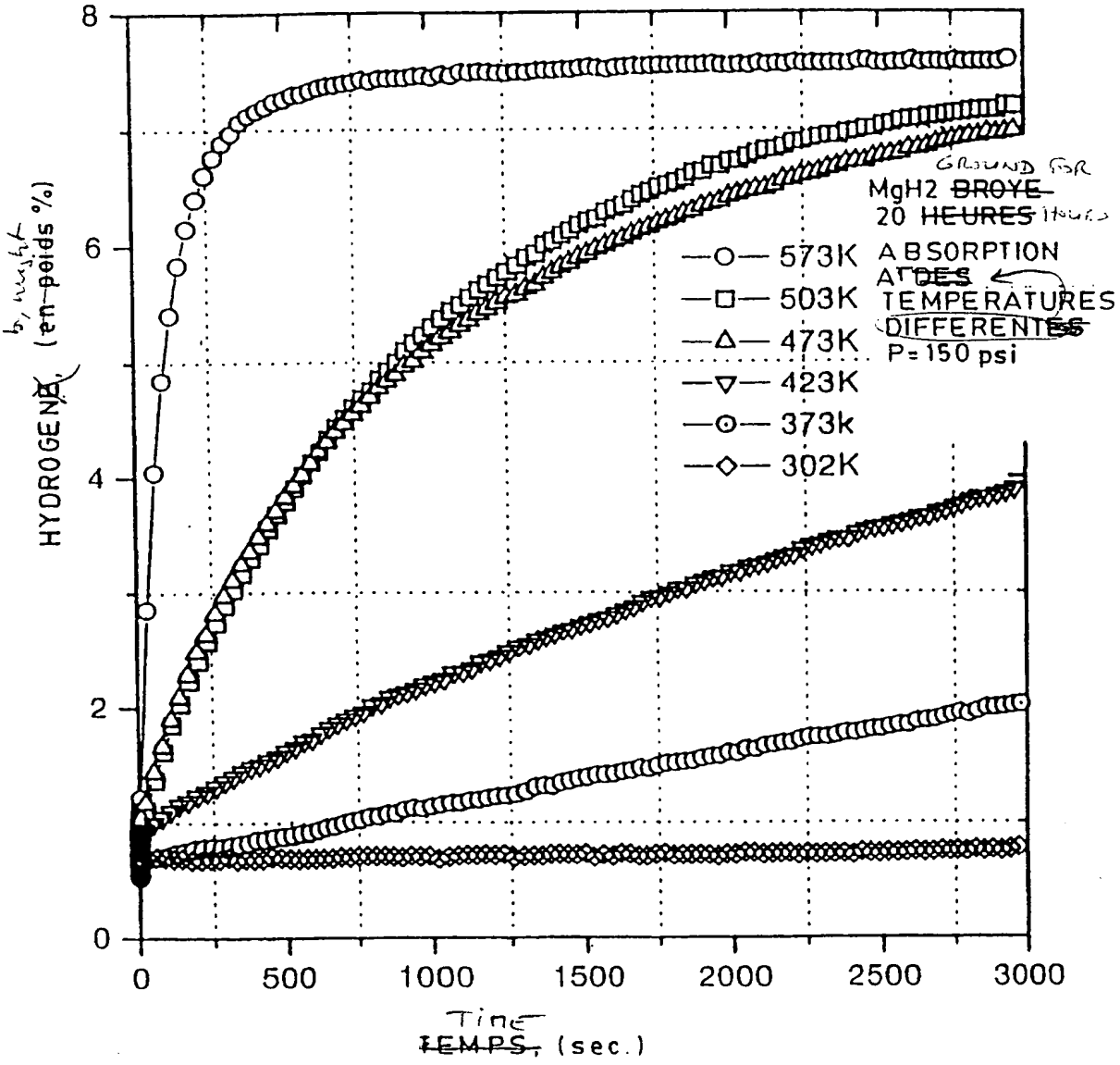

8
6
4
2
0
HYDROGEN (en poids %)
by weight
0
500
1000
1500
2000
2500
3000
Time
TEMPS (sec.)
GROUND FOR
MgH2 BROYE
20 HEURES HOURS
573K ABSORPTION
503K TEMPERATURES
473K DIFFERENTES
P=150 psi
423K
373k
302K

FIG. 8

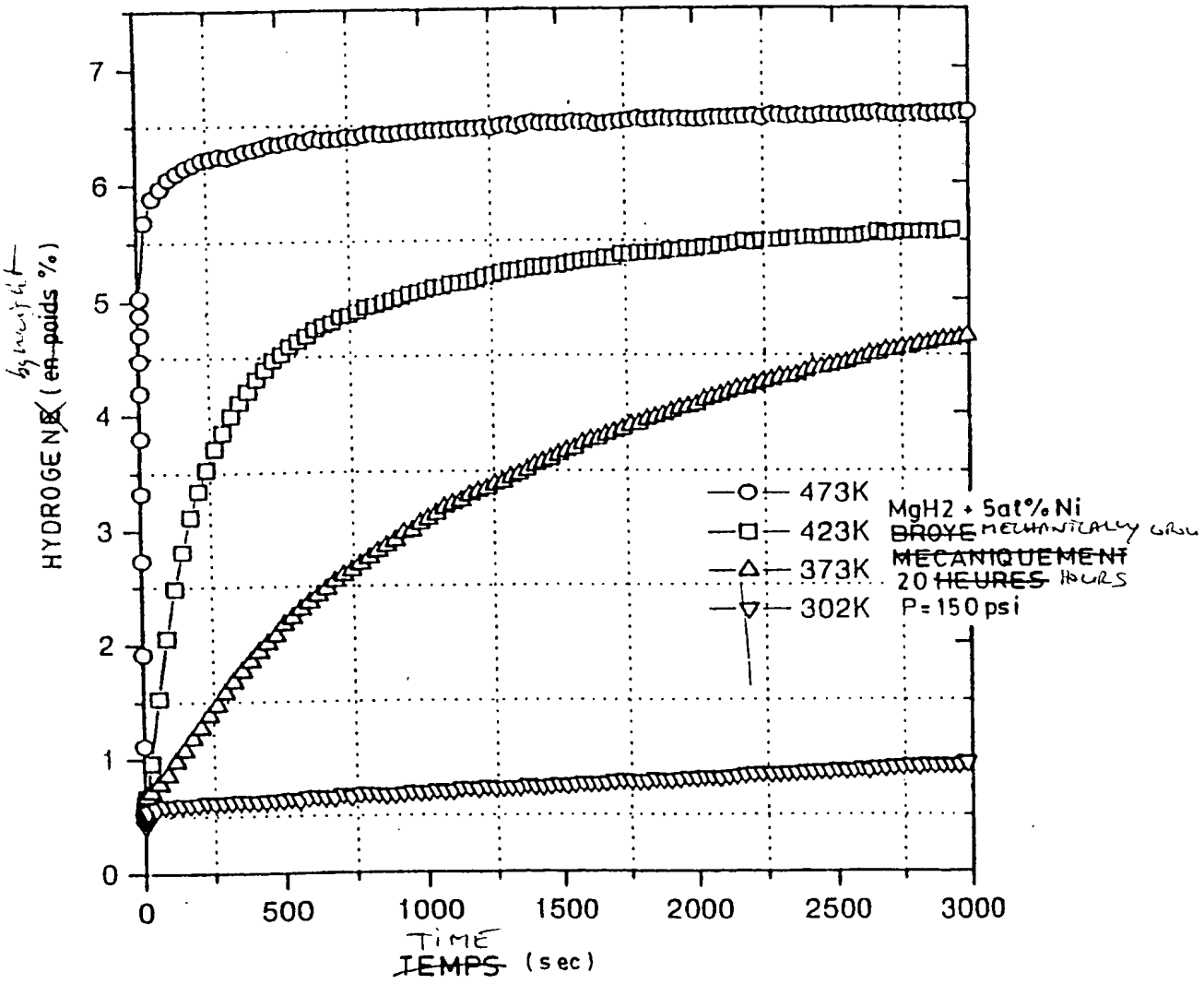

HYDROGEN ~~(en poids %)~~ by weight
0
1
2
3
4
5
6
7
0
500
1000
1500
2000
2500
3000
TIME
~~TEMPS~~ (sec)
473K
423K
373K
302K
MgH2 + 5at% Ni
~~BROYE~~ MECHANICALLY GROUND
~~MECANIQUEMENT~~
20 ~~HEURES~~ HOURS
P = 150 psi

FIG. 9

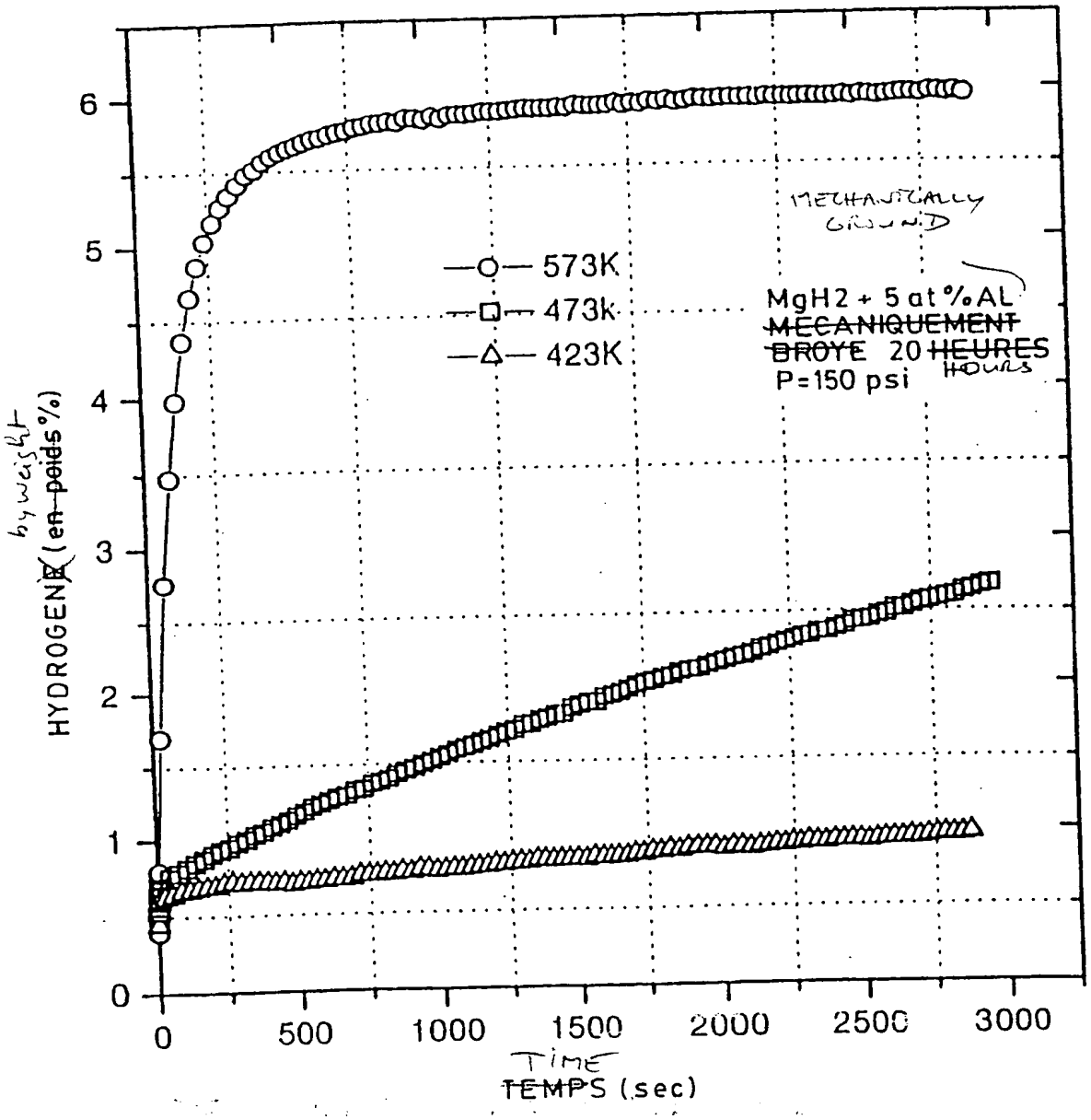

HYDROGEN (en poids %) by weight
TEMPS (sec) TIME
0
500
1000
1500
2000
2500
3000
1
2
3
4
5
6
573K
473k
423K
MgH2 + 5 at % AL
MECANIQUEMENT
BROYE 20 HEURES
HOURS
P=150 psi
MECHANICALLY
GROUND

FIG. 10

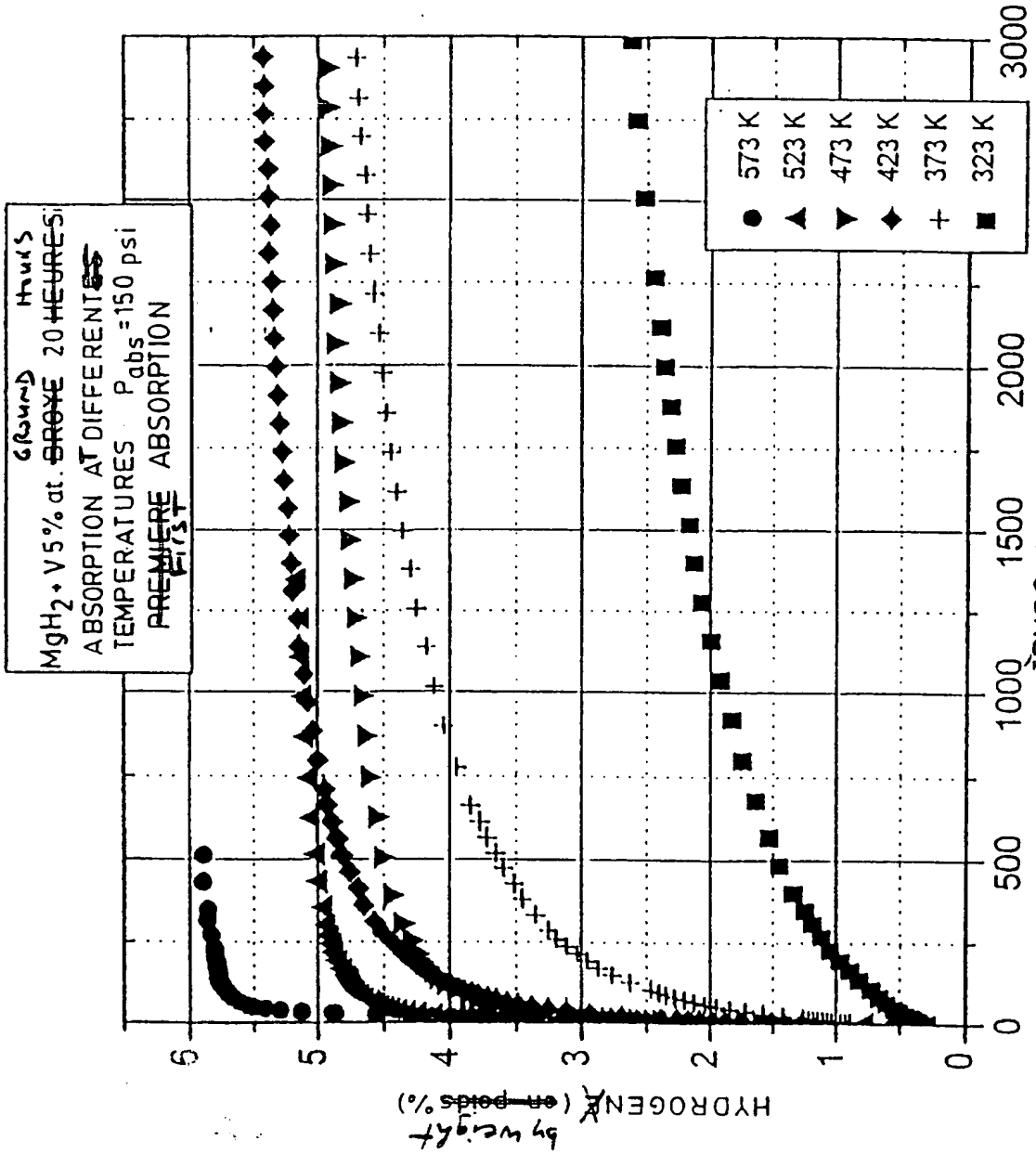
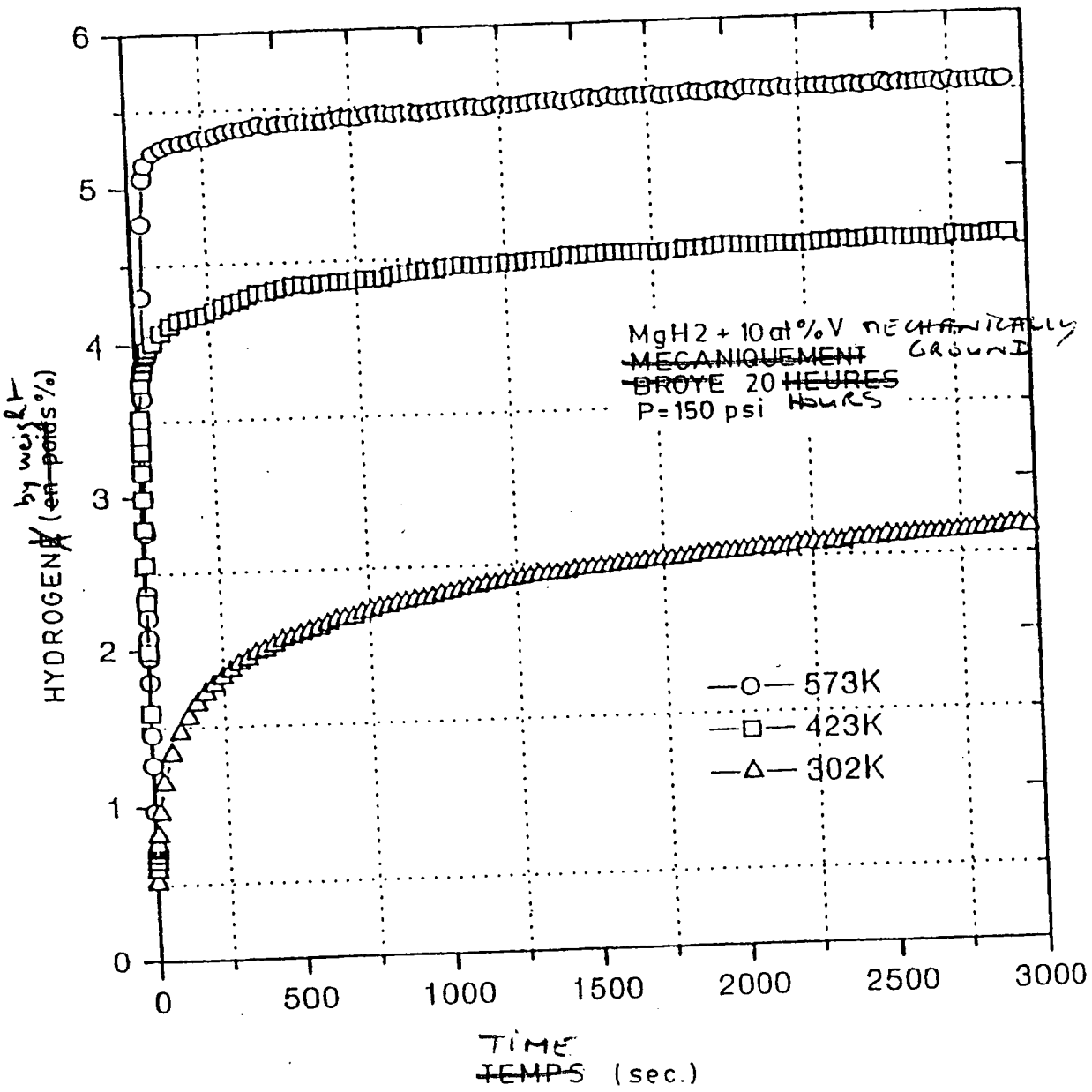


FIG. 11

FIG. 12


HYDROGEN by weight (en poids %)
TIME
TEMPS (sec.)
MgH2 + 10 at% V MECHANICALLY GROUND
MECANIQUEMENT BROYE 20 HEURES
P=150 psi HOURS
—o— 573K
—□— 423K
—△— 302K
0
1
2
3
4
5
6
0
500
1000
1500
2000
2500
3000

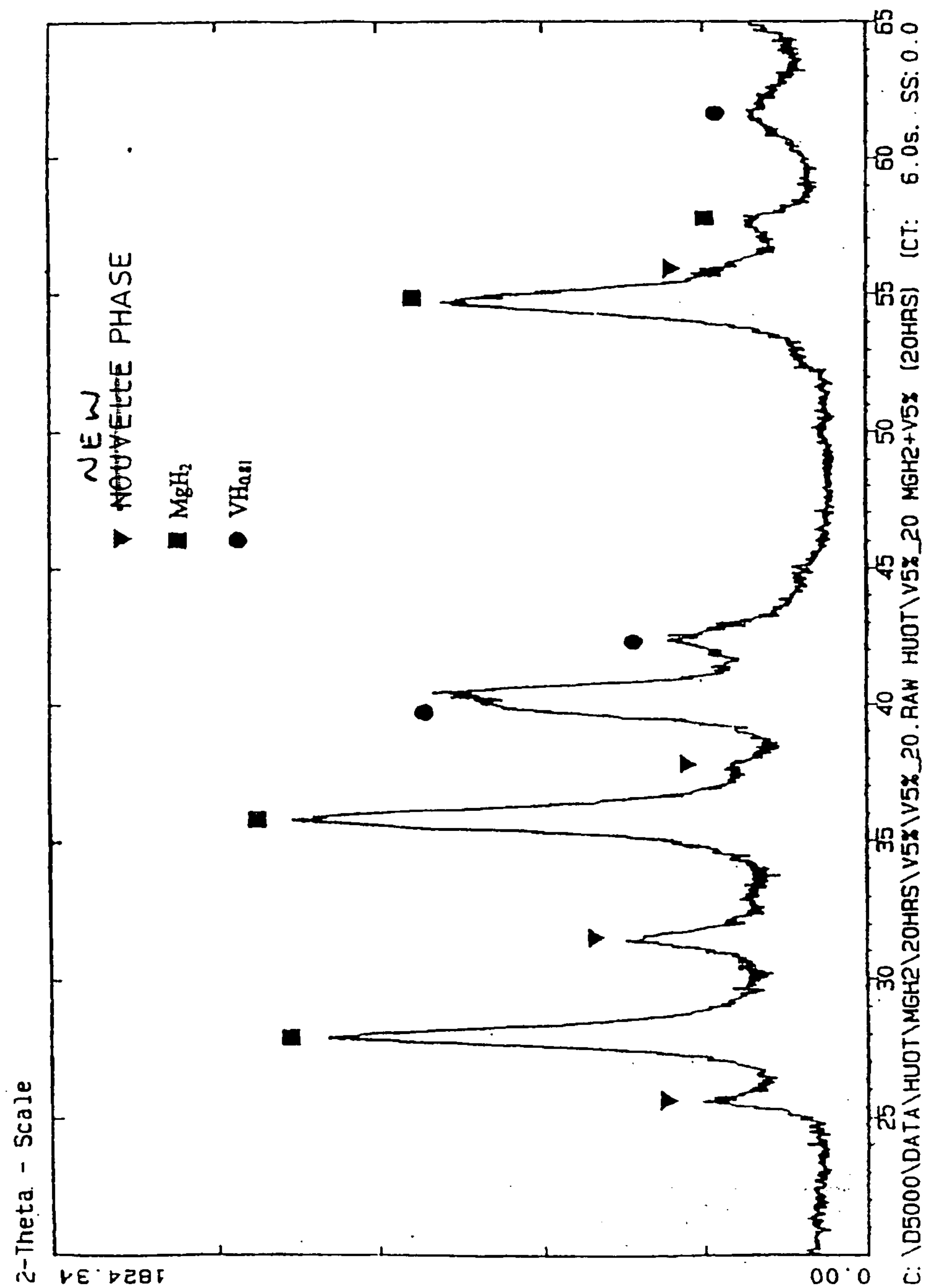

NEW
NOUVELLE PHASE
MgH₂
VH0.81
2-Theta - Scale
1824.34
0.00
25
30
35
40
45
50
55
60
65
C:\D5000\DATA\HUOT\MGH2\20HRS\V5%\V5%_20.RAW HUOT\V5%_20 MGH2+V5% (20HRS) (CT: 6.0s. SS: 0.0

FIG. 13

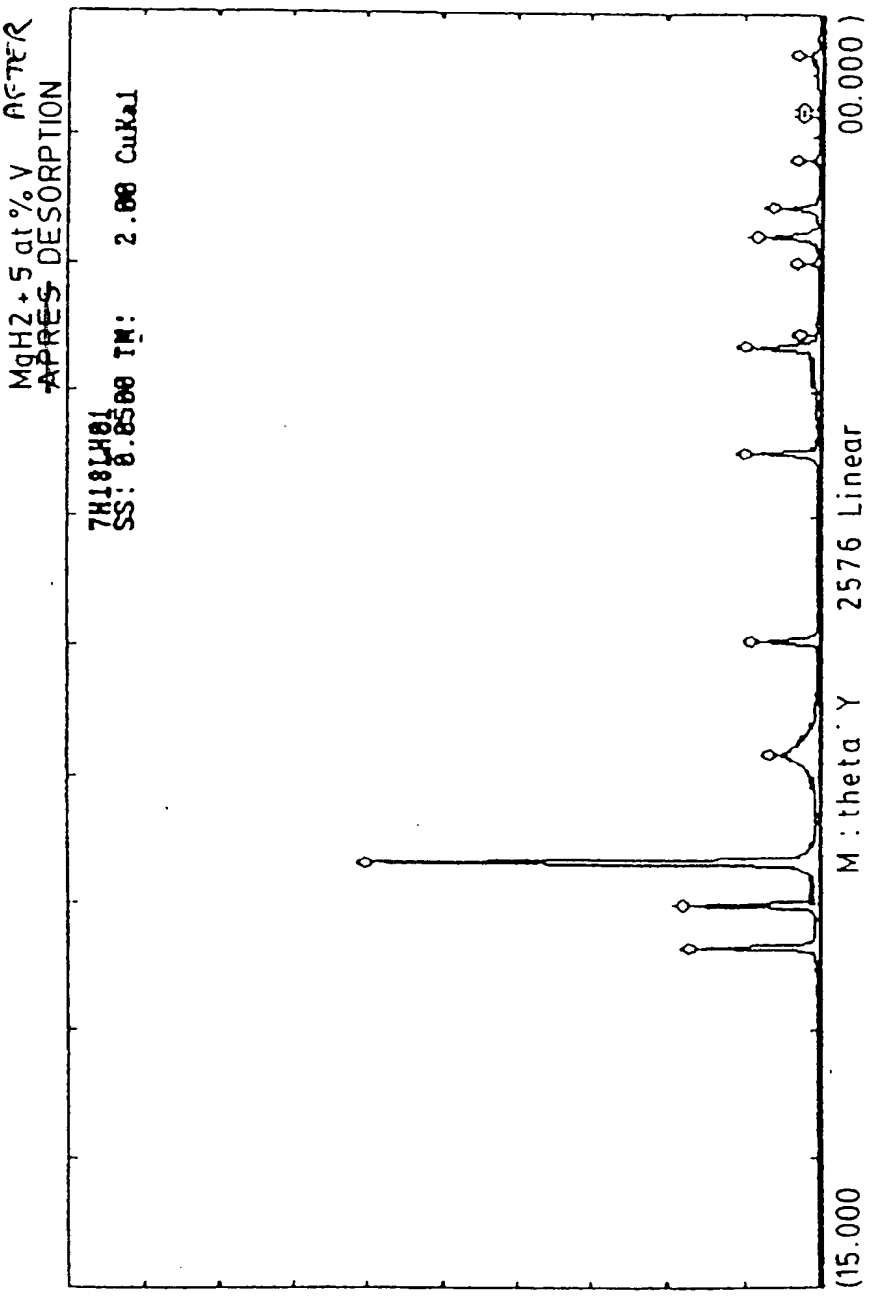

MgH2 + 5 at % V APRES DESORPTION
7H18LH01
SS: 0.0500 TM: 2.000 CuKal
(15.000
M : theta Y 2576 Linear
00.000)
Mg

FIG. 14

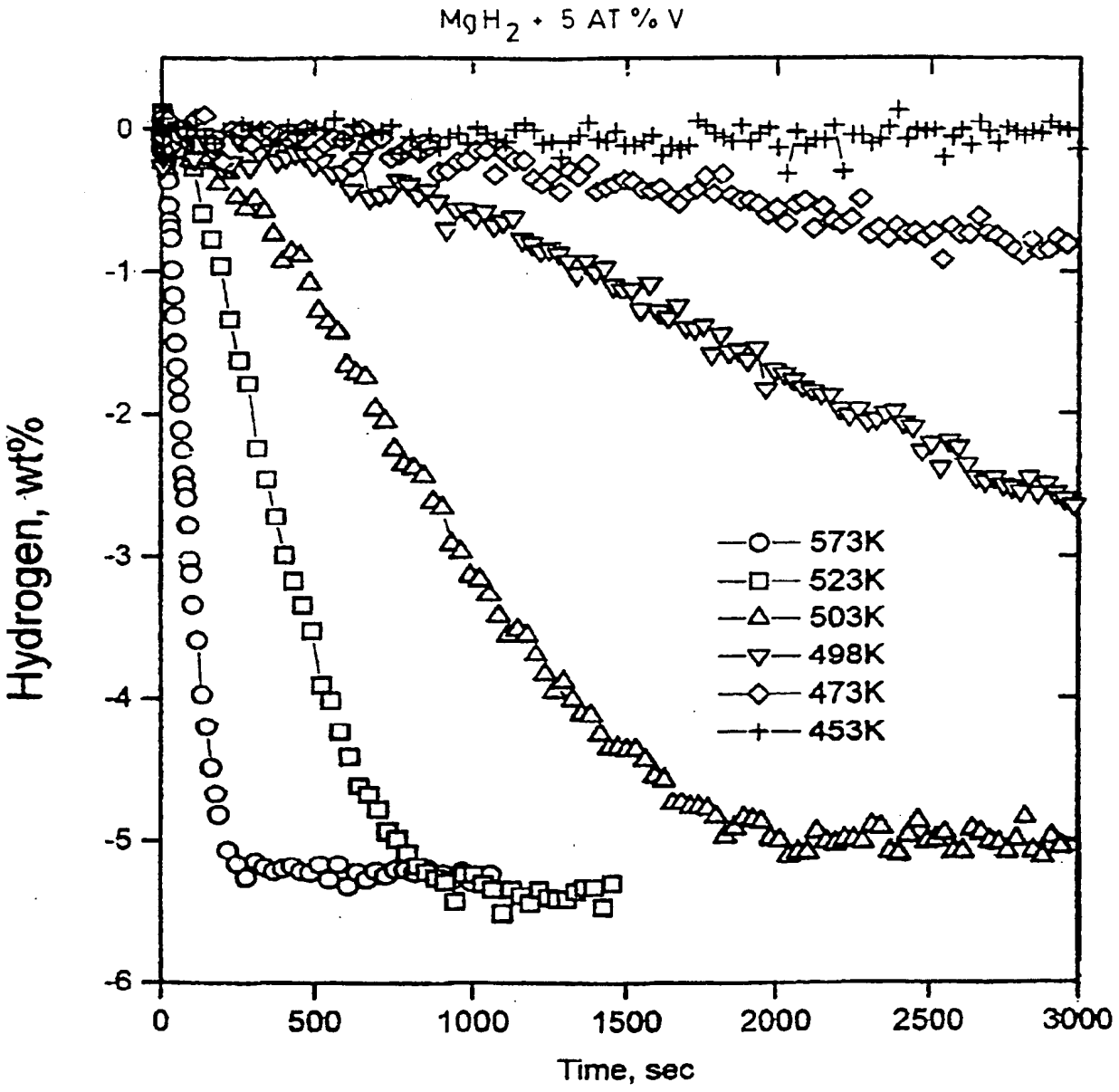

MgH2 + 5 AT % V
Hydrogen, wt%
Time, sec
0
-1
-2
-3
-4
-5
-6
0
500
1000
1500
2000
2500
3000
573K
523K
503K
498K
473K
453K

FIG. 15

FIG. 16

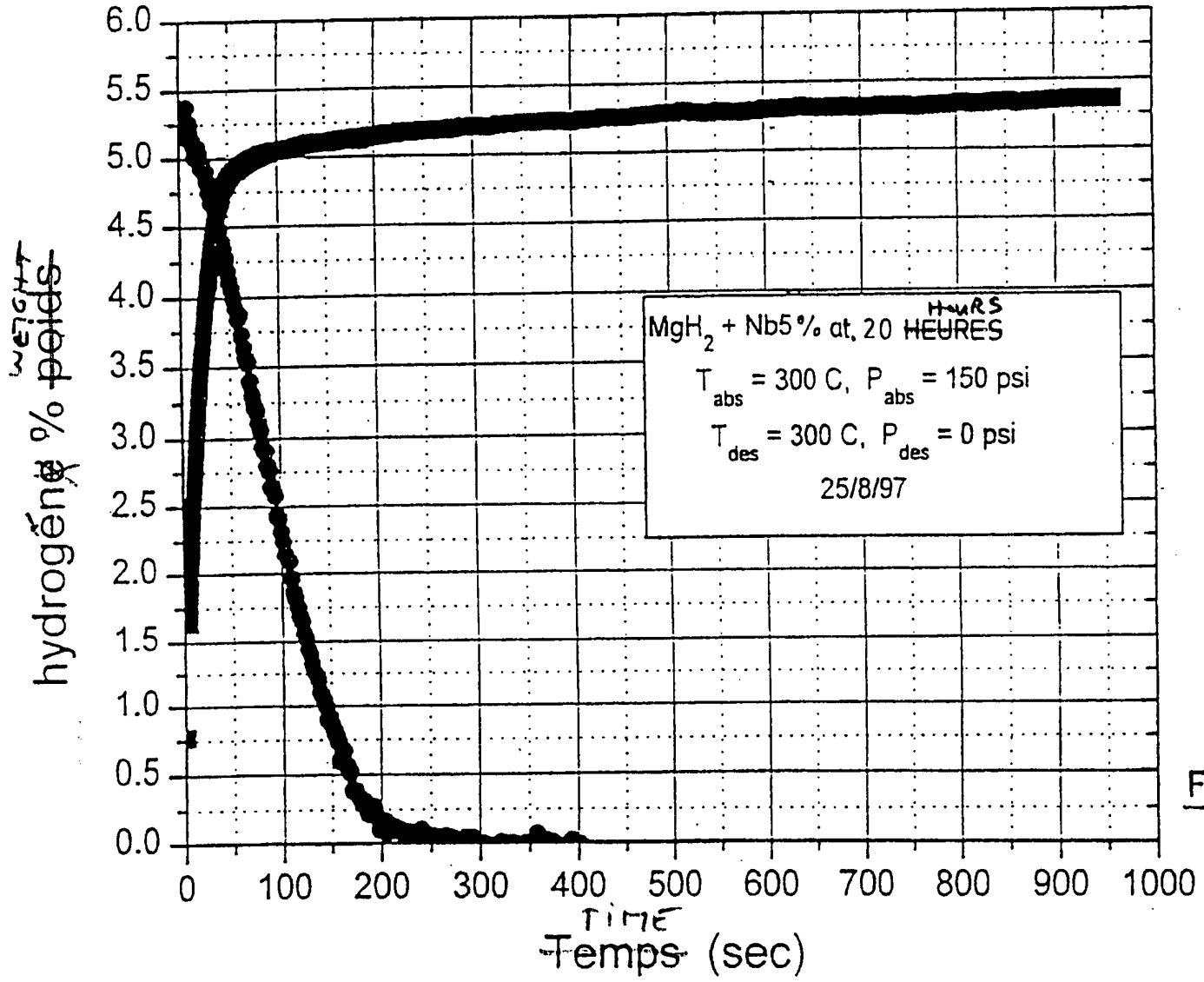


FIG. 17

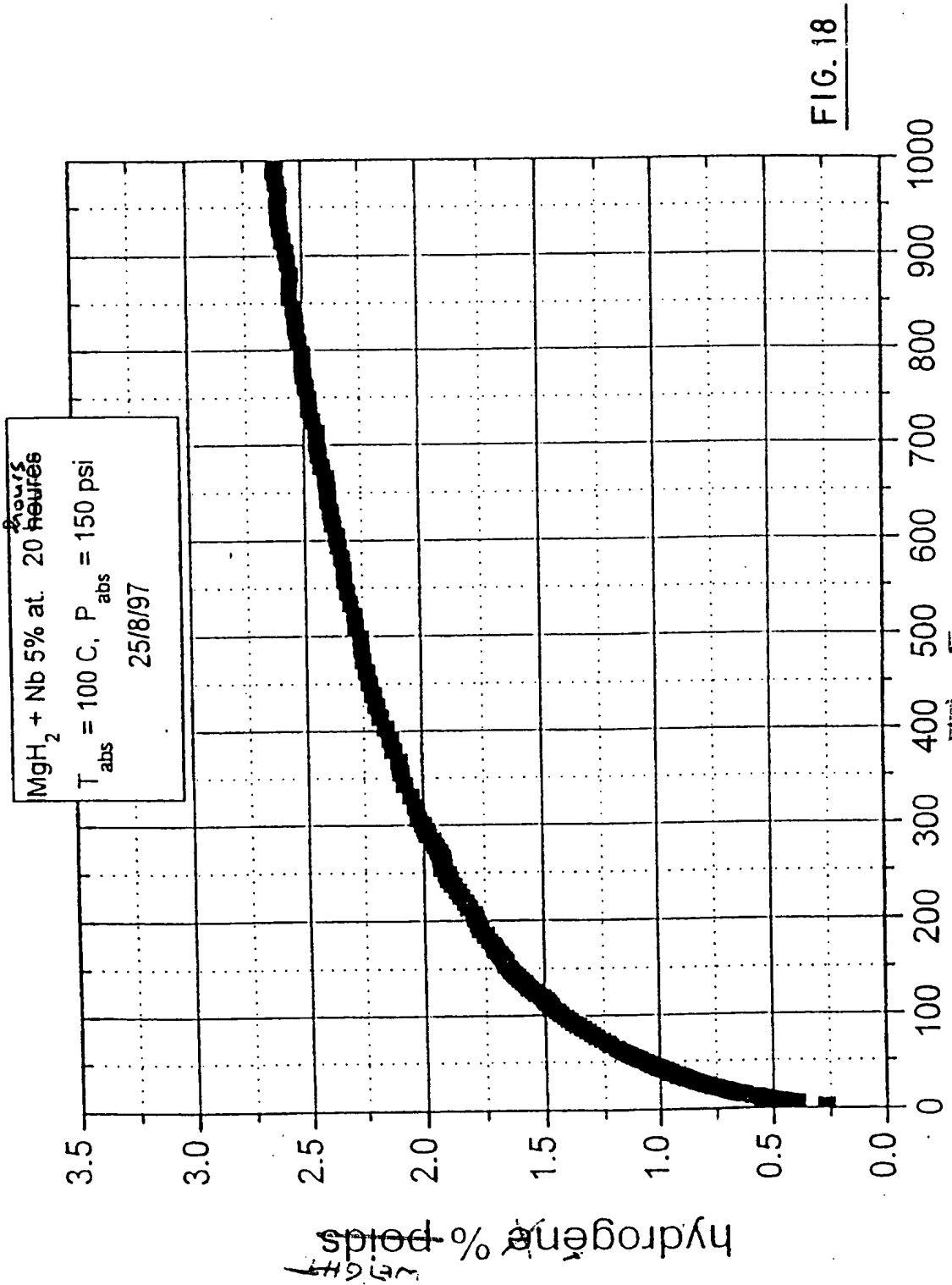

MgH2 + Nb 5% at. 20 hours heures
Tabs = 100 C, Pabs = 150 psi
25/8/97
hydrogene % poids weight
Temps (sec) Time
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
0
100
200
300
400
500
600
700
800
900
1000

FIG. 18

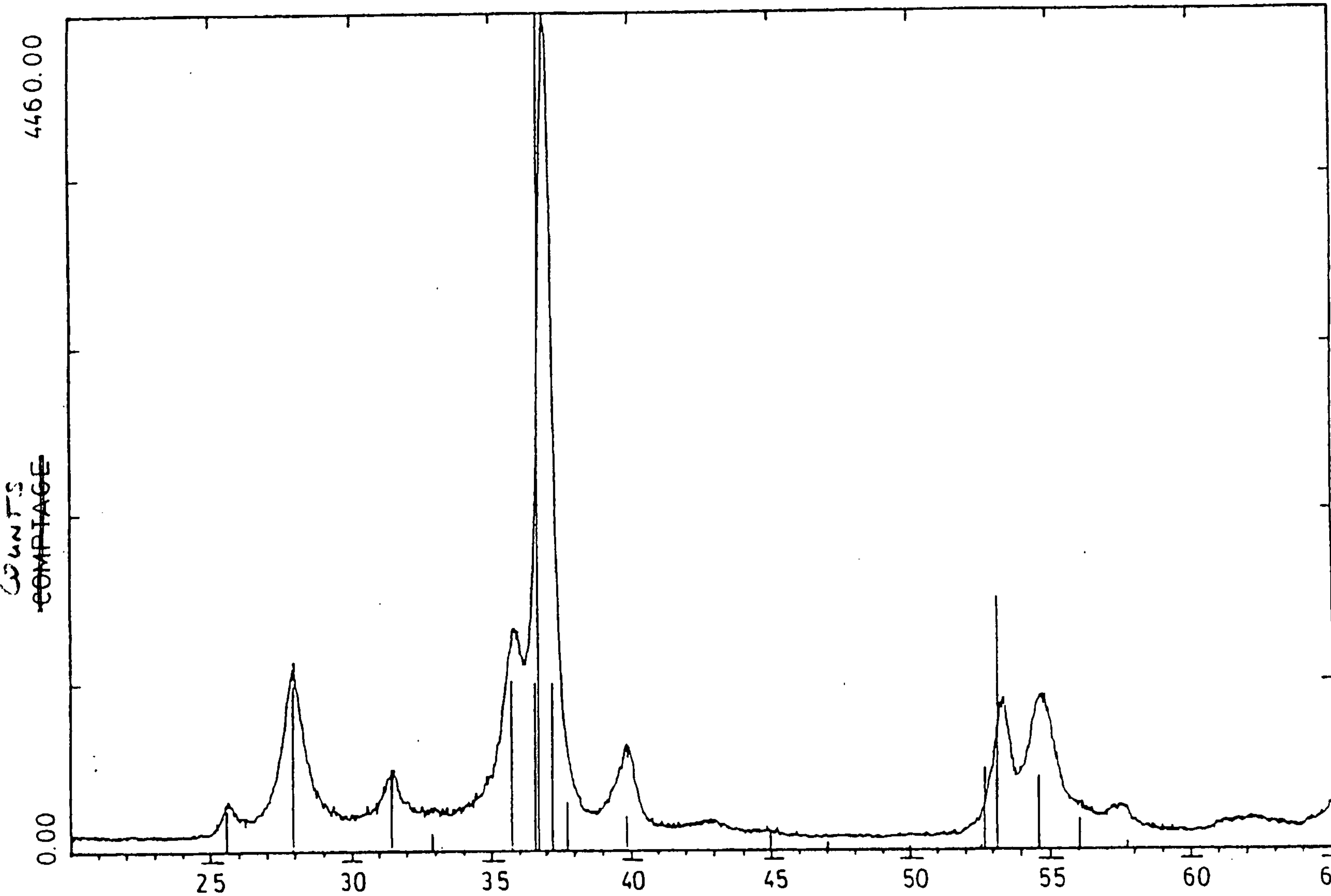


FIG. 19

PCT/CA98/00987

FIG. 20

FIG. 21

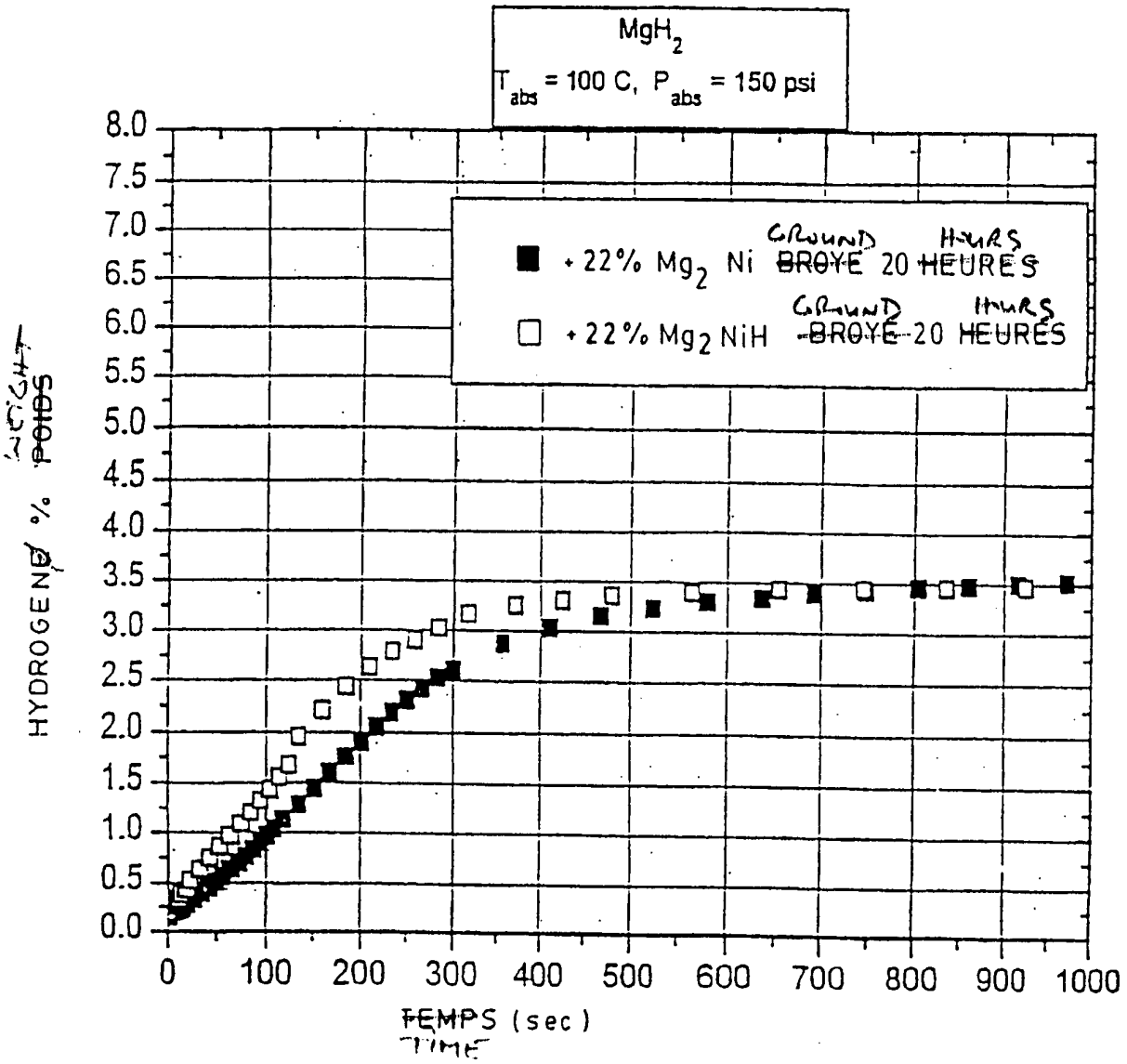


FIG. 22

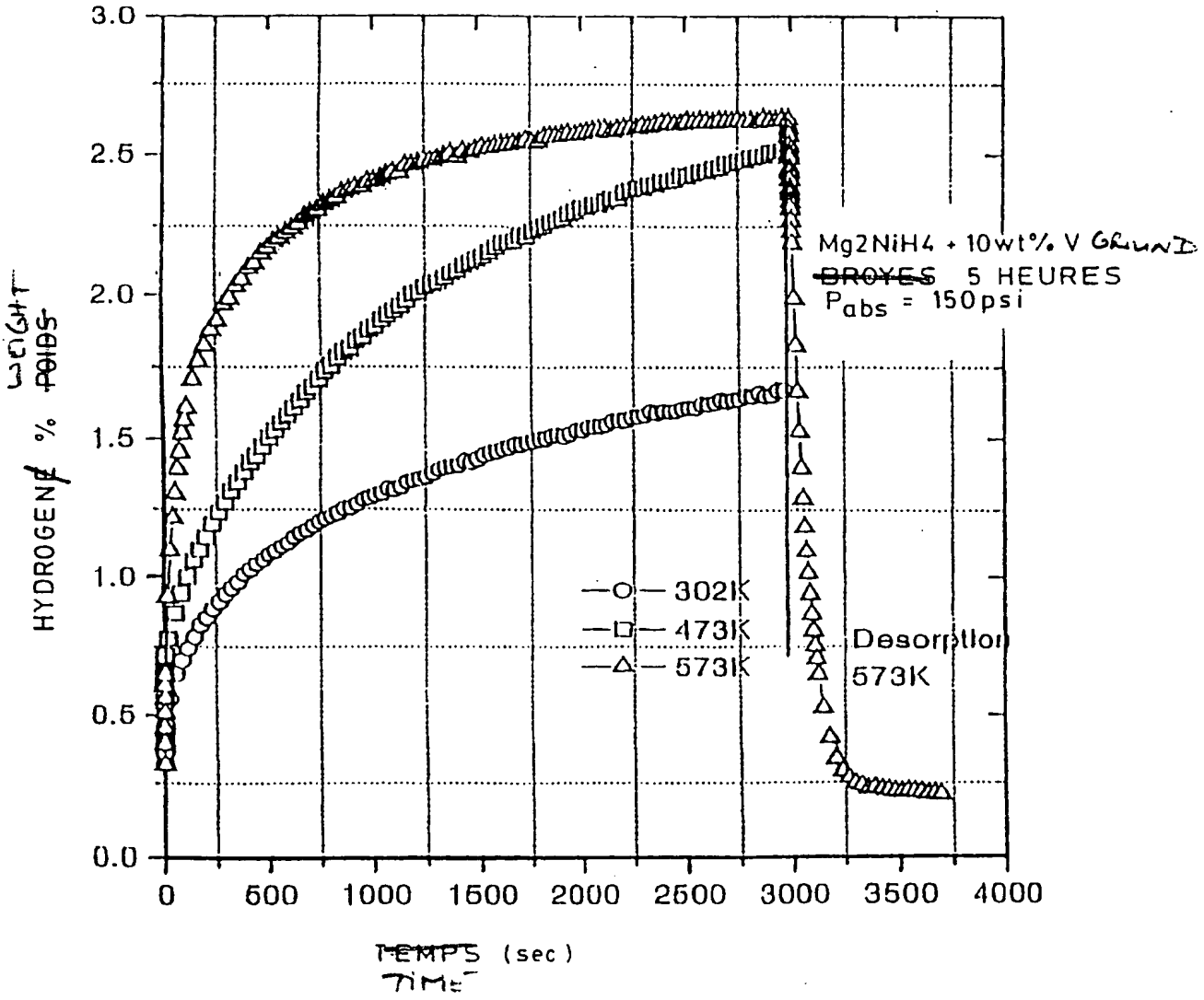
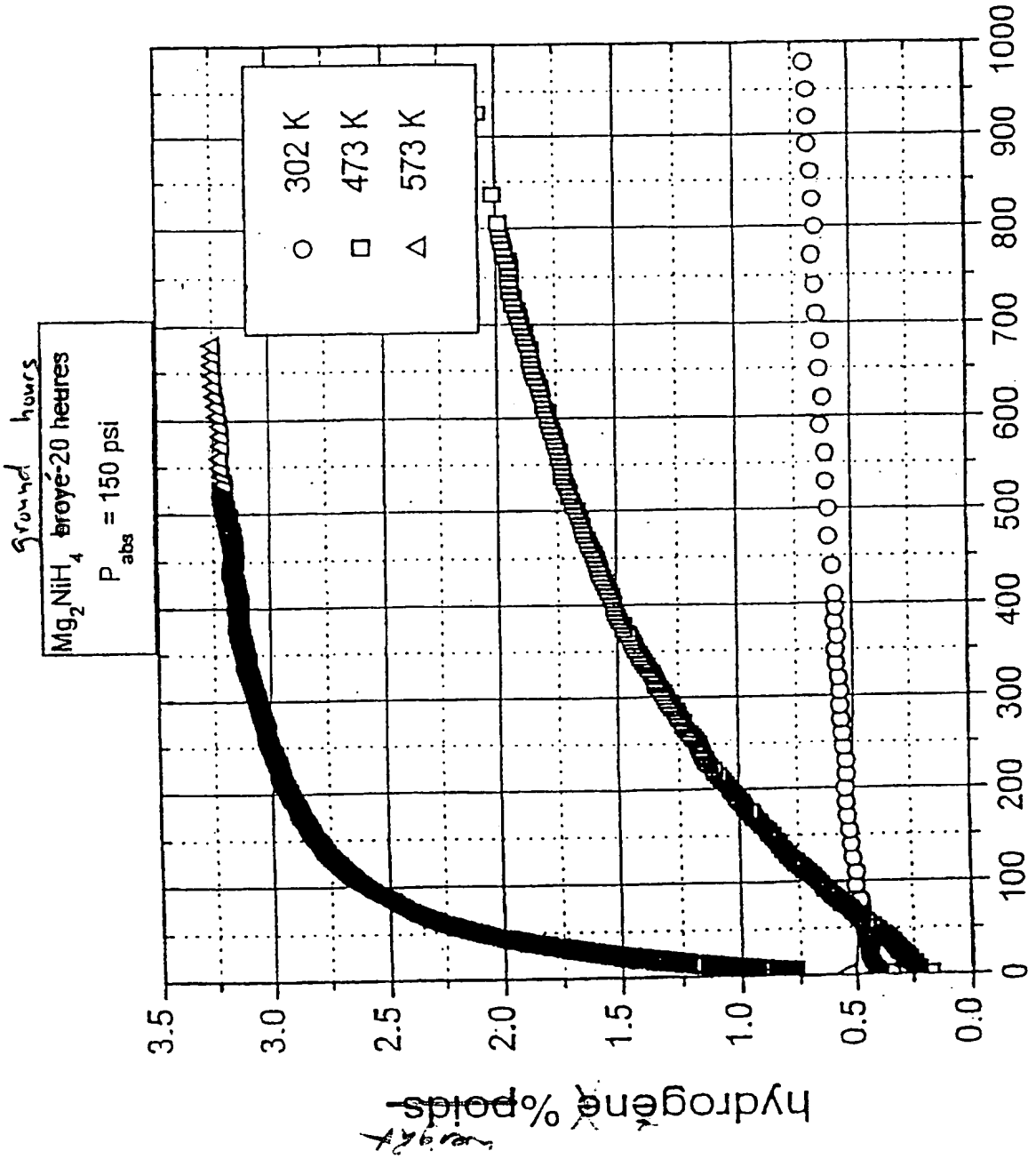

3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
500
1000
1500
2000
2500
3000
3500
4000
HYDROGEN % WEIGHT
TEMPS (sec)
TIME
Mg2NiH4 + 10wt% V GROUND
BROYES 5 HEURES
Pabs = 150psi
302K
473K
573K
Desorption
573K

FIG. 23

FIG. 24



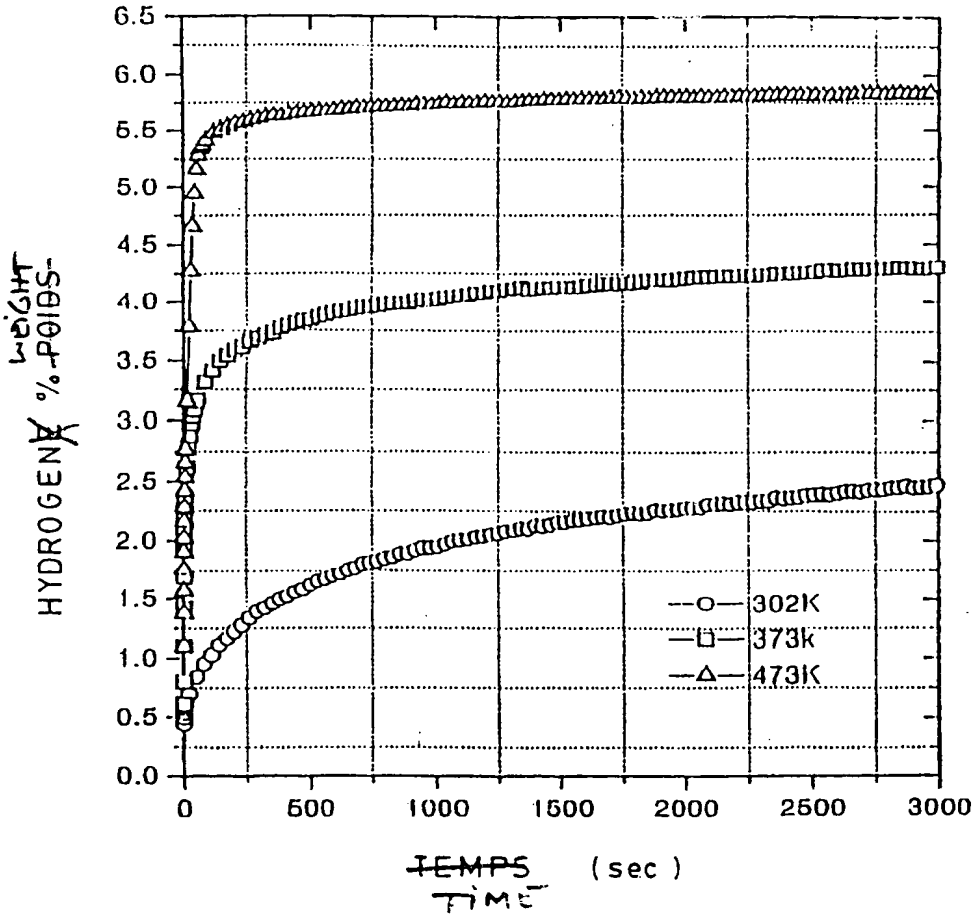

HYDROGEN % WEIGHT
% POIDS-
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0
500
1000
1500
2000
2500
3000
TEMPS (sec)
TIME
--o-- 302K
--□-- 373K
--△-- 473K

FIG. 25

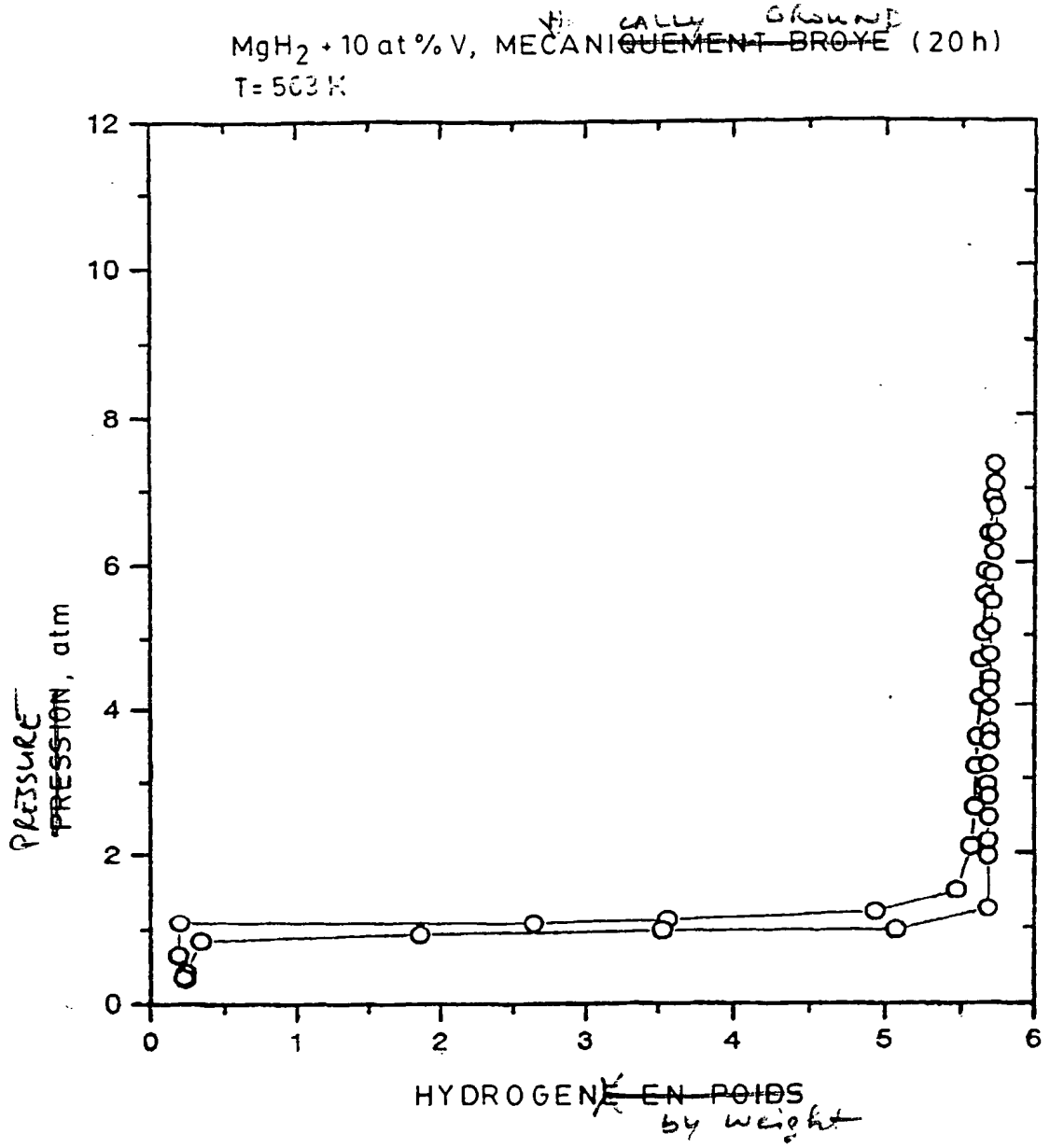
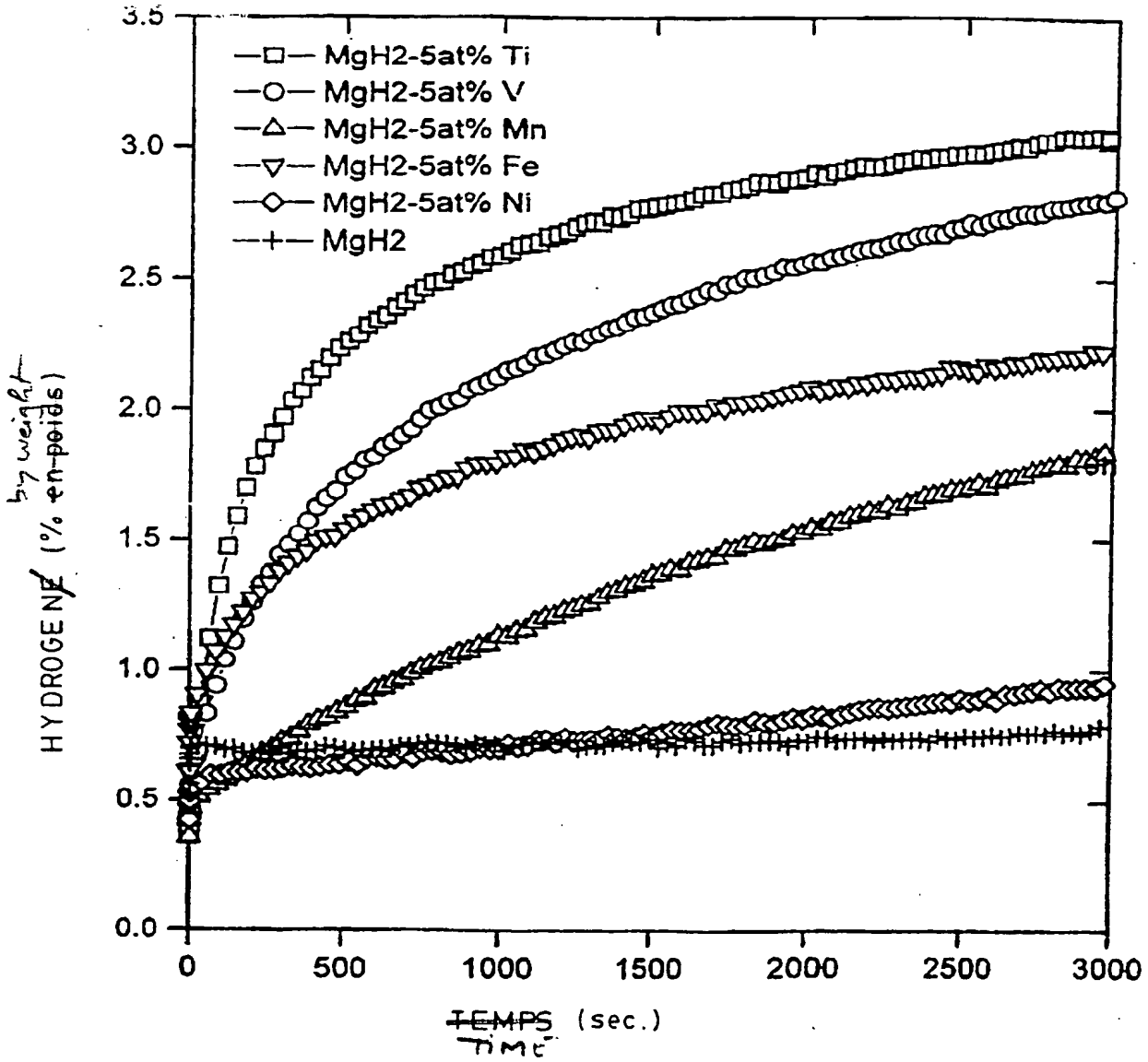

MgH2 + 10 at % V, MECANIQUEMENT BROYE (20 h)
T = 503 K
PRESSION, atm
HYDROGENE EN POIDS
0
2
4
6
8
10
12
0
1
2
3
4
5
6

FIG. 26



MgH$_2$-5at%Tm, absorption à 302K

FIG. 27

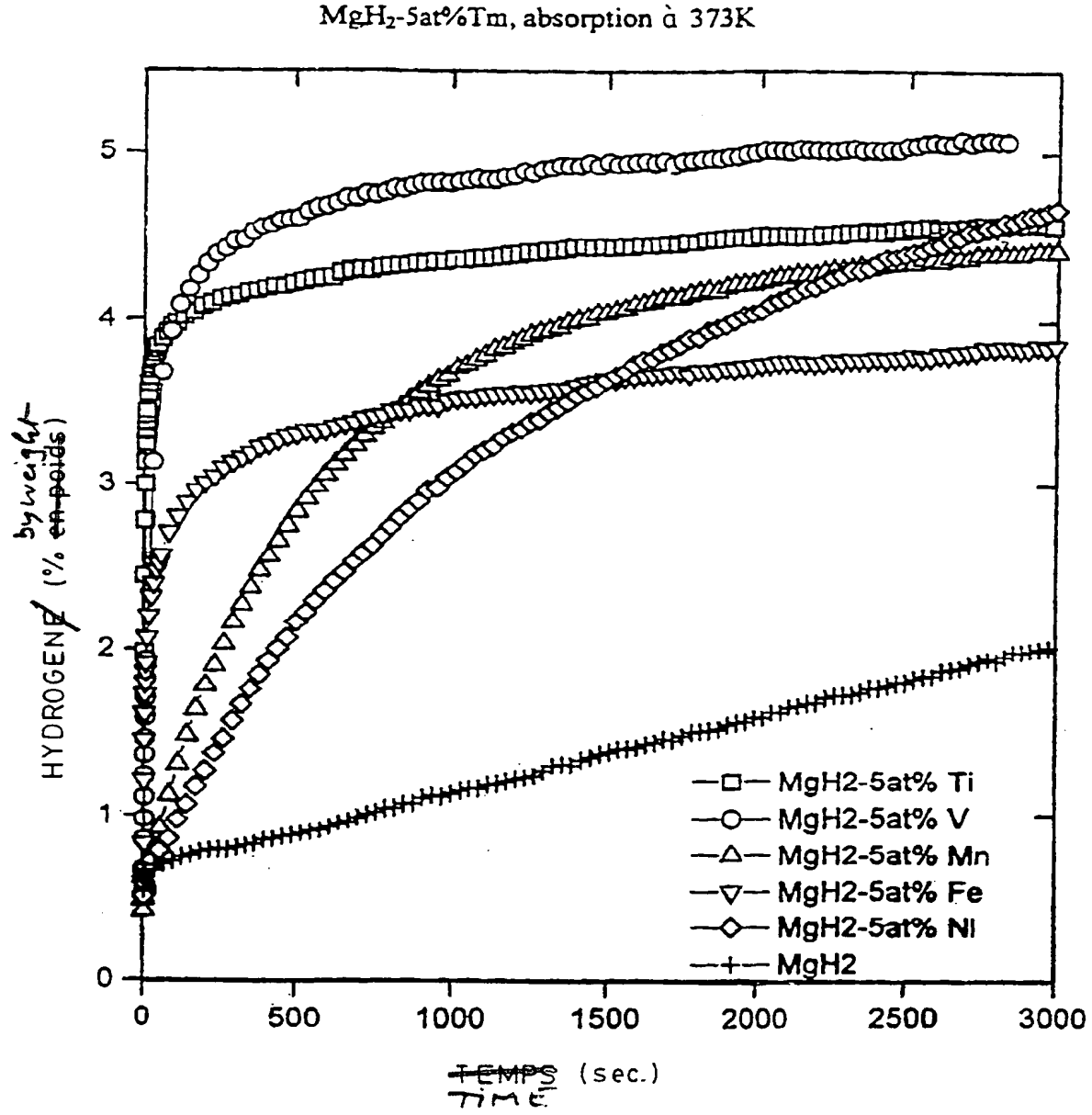


FIG. 28

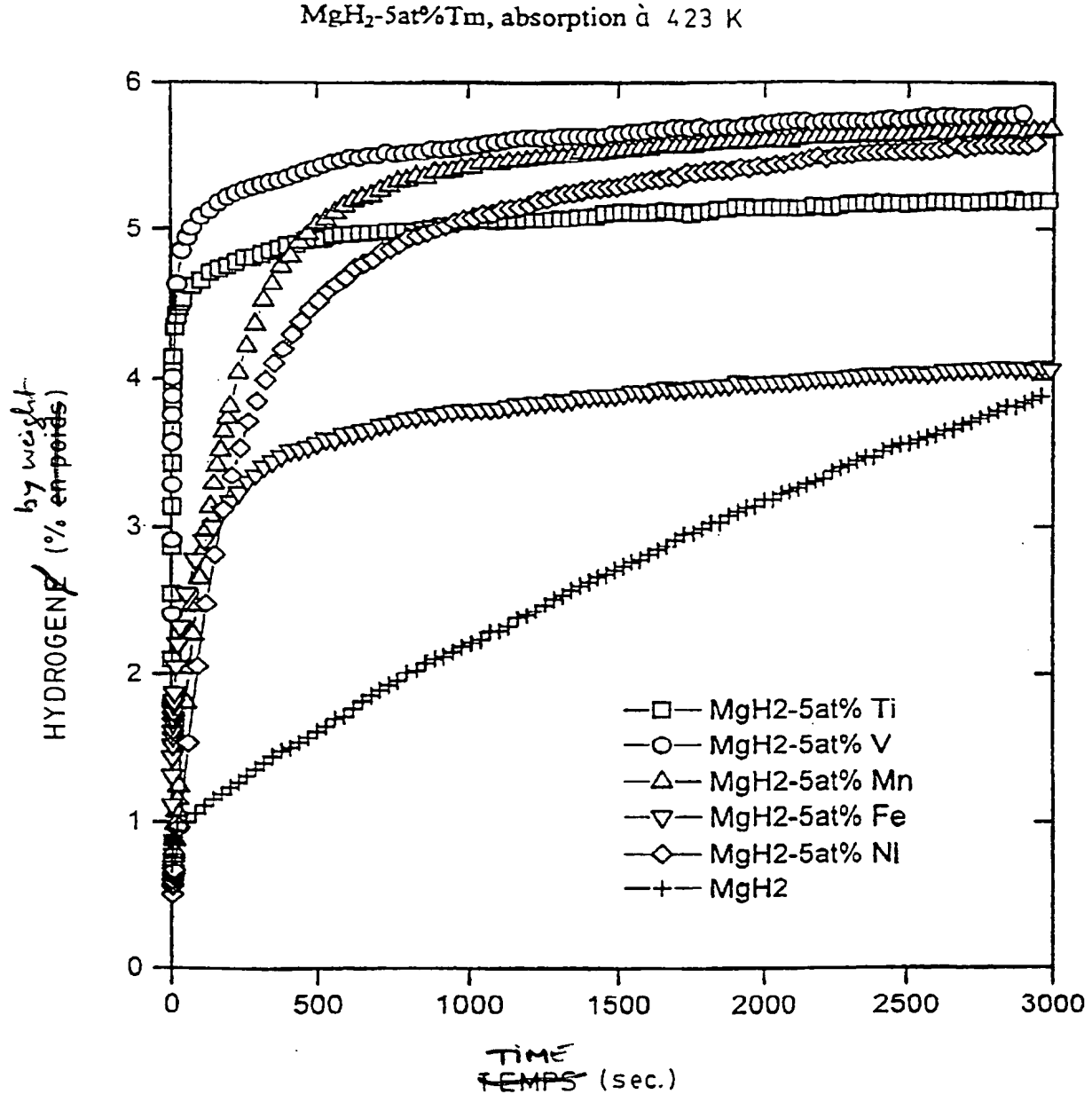

MgH2-5at%Tm, absorption à 423 K
HYDROGEN by weight (% en poids)
TIME TEMPS (sec.)
MgH2-5at% Ti
MgH2-5at% V
MgH2-5at% Mn
MgH2-5at% Fe
MgH2-5at% Ni
MgH2
0
1
2
3
4
5
6
0
500
1000
1500
2000
2500
3000

FIG. 29

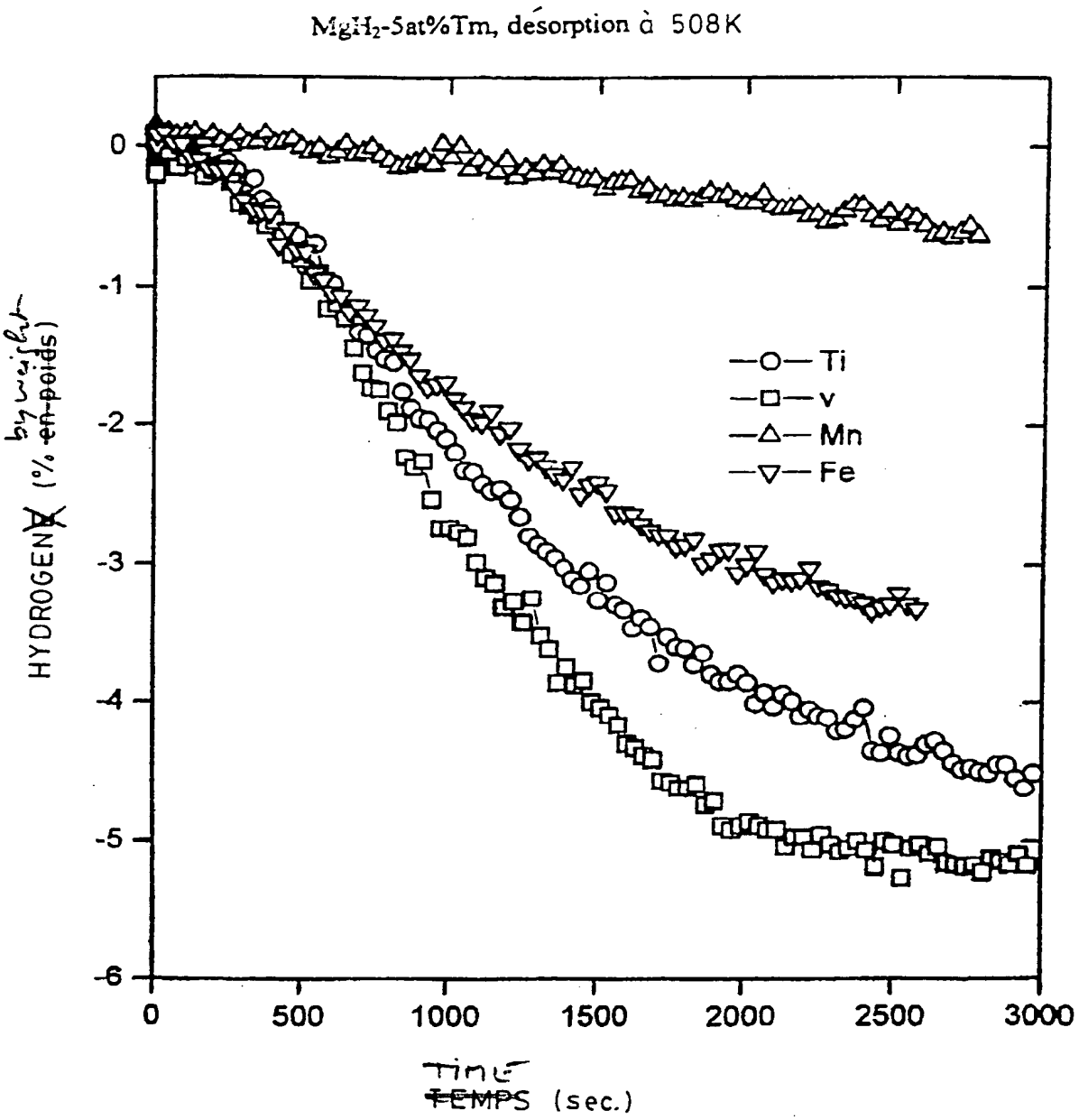

MgH2-5at%Tm, désorption à 508K
HYDROGEN (% by weight en-poids)
0
-1
-2
-3
-4
-5
-6
0
500
1000
1500
2000
2500
3000
Time
TEMPS (sec.)
Ti
v
Mn
Fe

FIG. 30

MgH_2-5at%Tm, desorption à 573K,

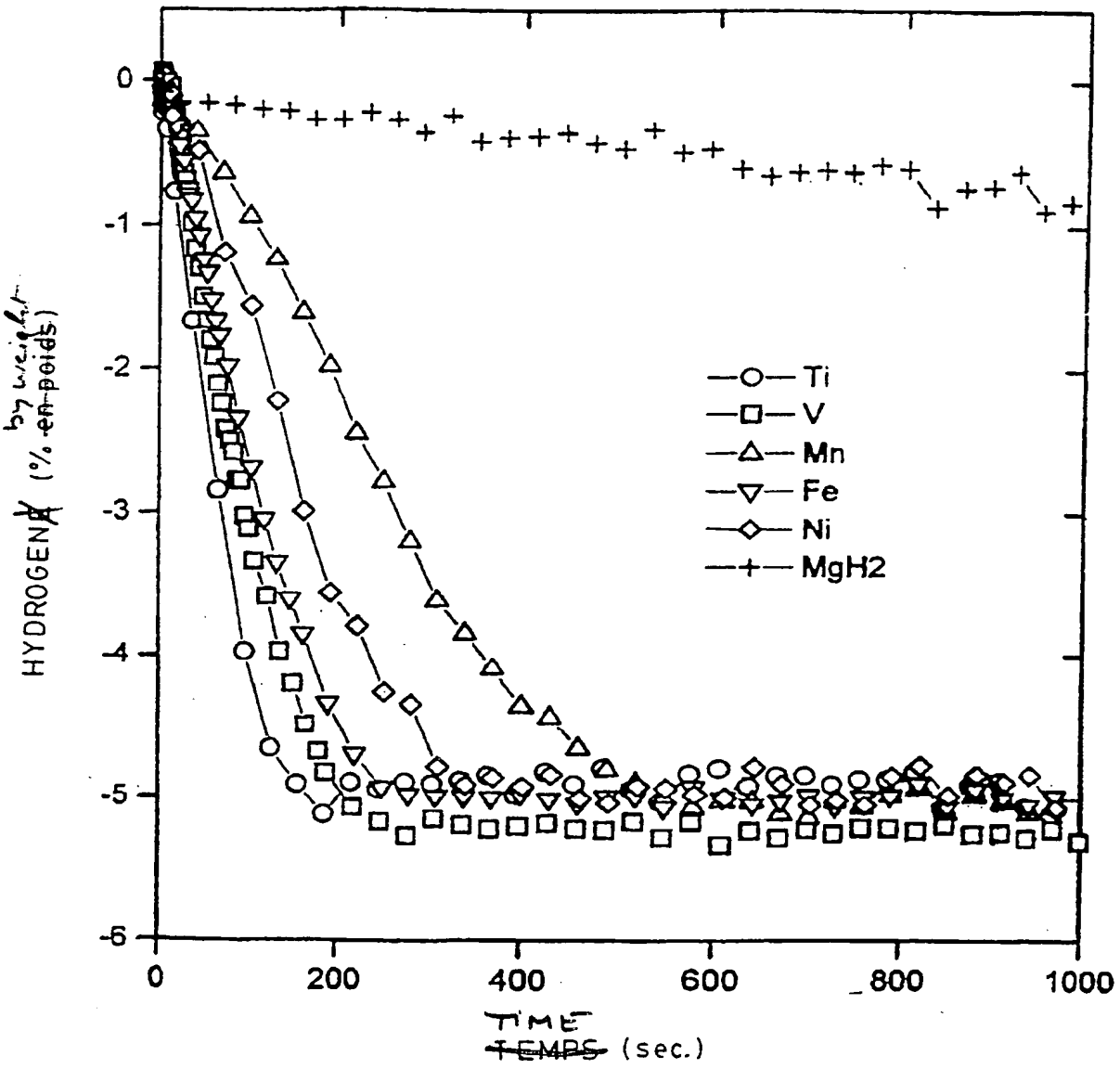


FIG. 31

MgH2 + 5 at % Cr ~~BROYE MECANIQUEMENT PENDANT~~ MECHANICALLY GROUND FOR 20h

P = 150 psi

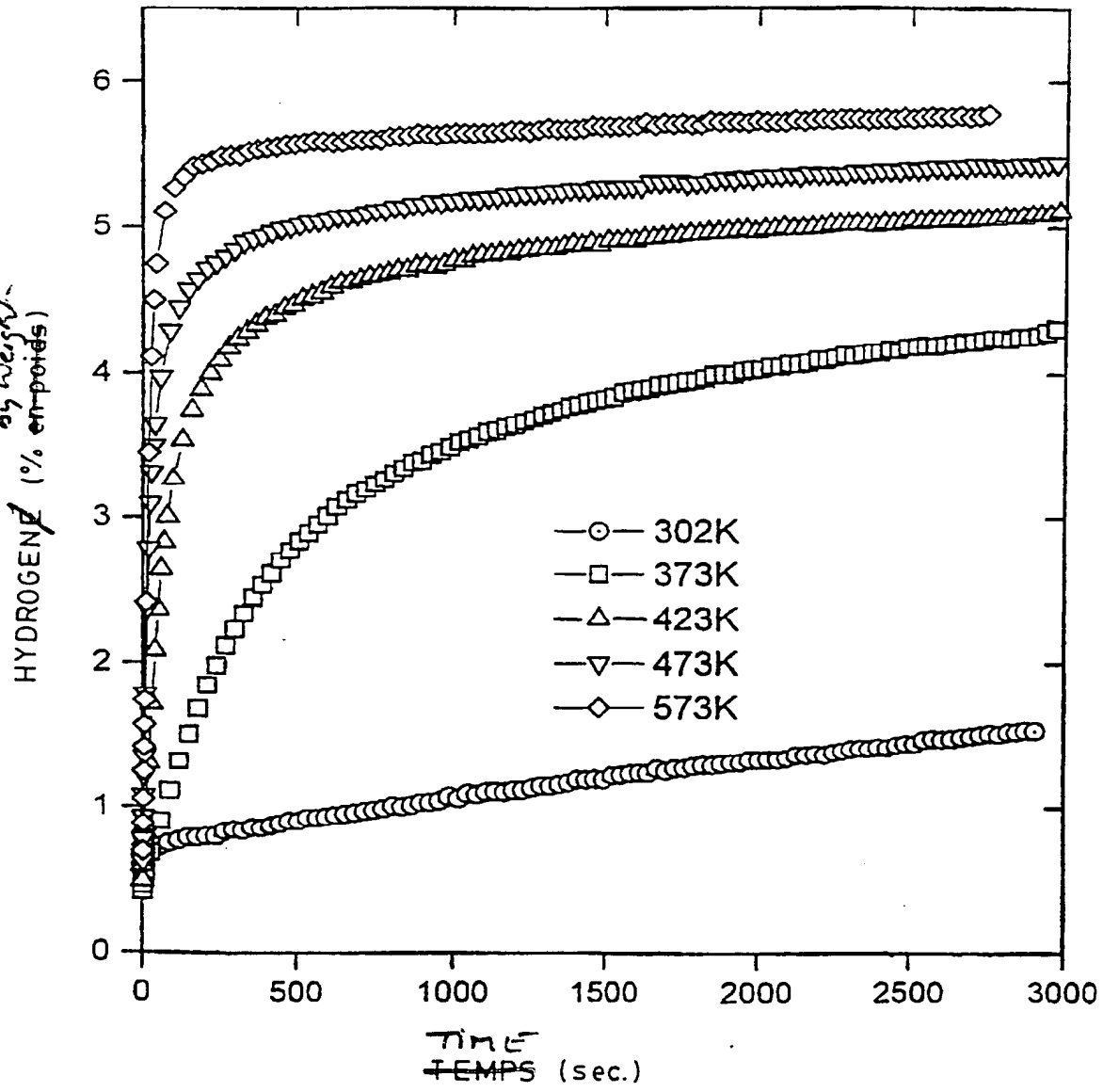


FIG. 32

MgH2 + 5 at % Ca ~~BROYE MECANIQUEMENT PENDANT~~ MECHANICALLY GROUND FOR 20h
P = 150 psi

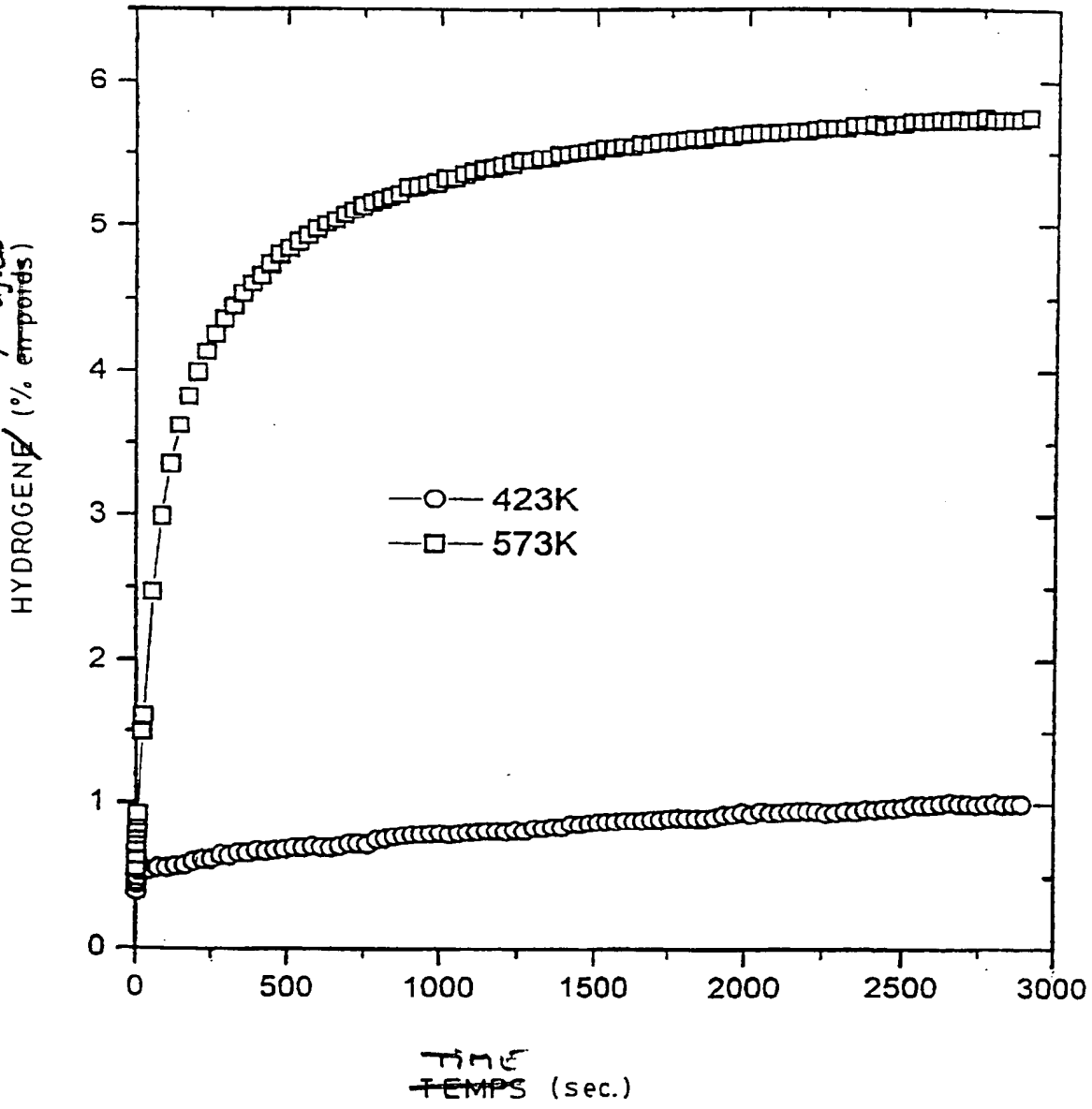


FIG. 33

MgH2 + 5 at % Ce ~~BROYE MECANIQUEMENT PENDANT~~ MECHANICALLY GROUND FOR 20h

P = 150 psi

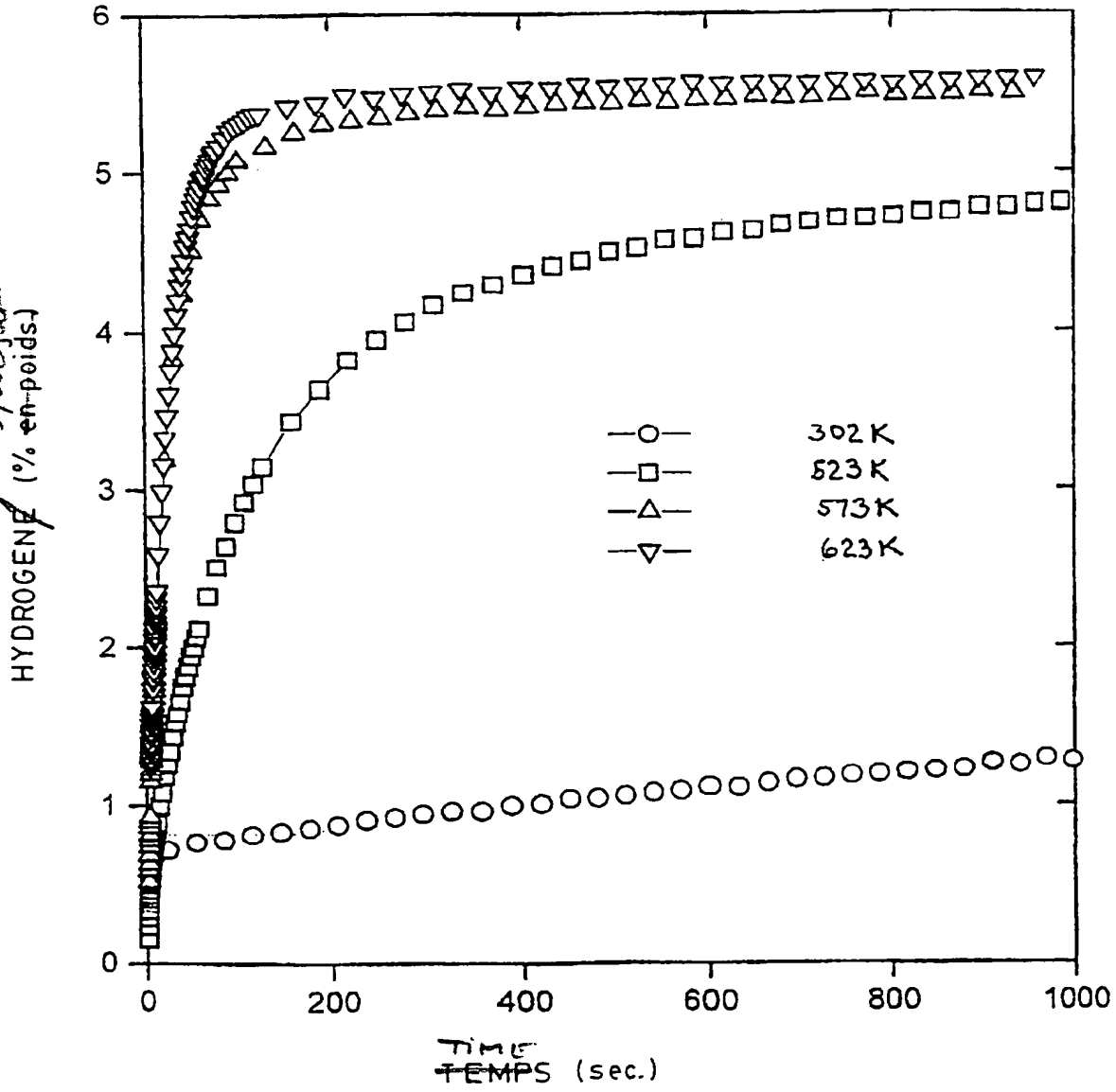


FIG. 34

MgH2 + 5wt % Y, ~~BROYE MECANIQUEMENT PENDANT~~ MECHANICALLY GROUND FOR 20h
P = 150 psi

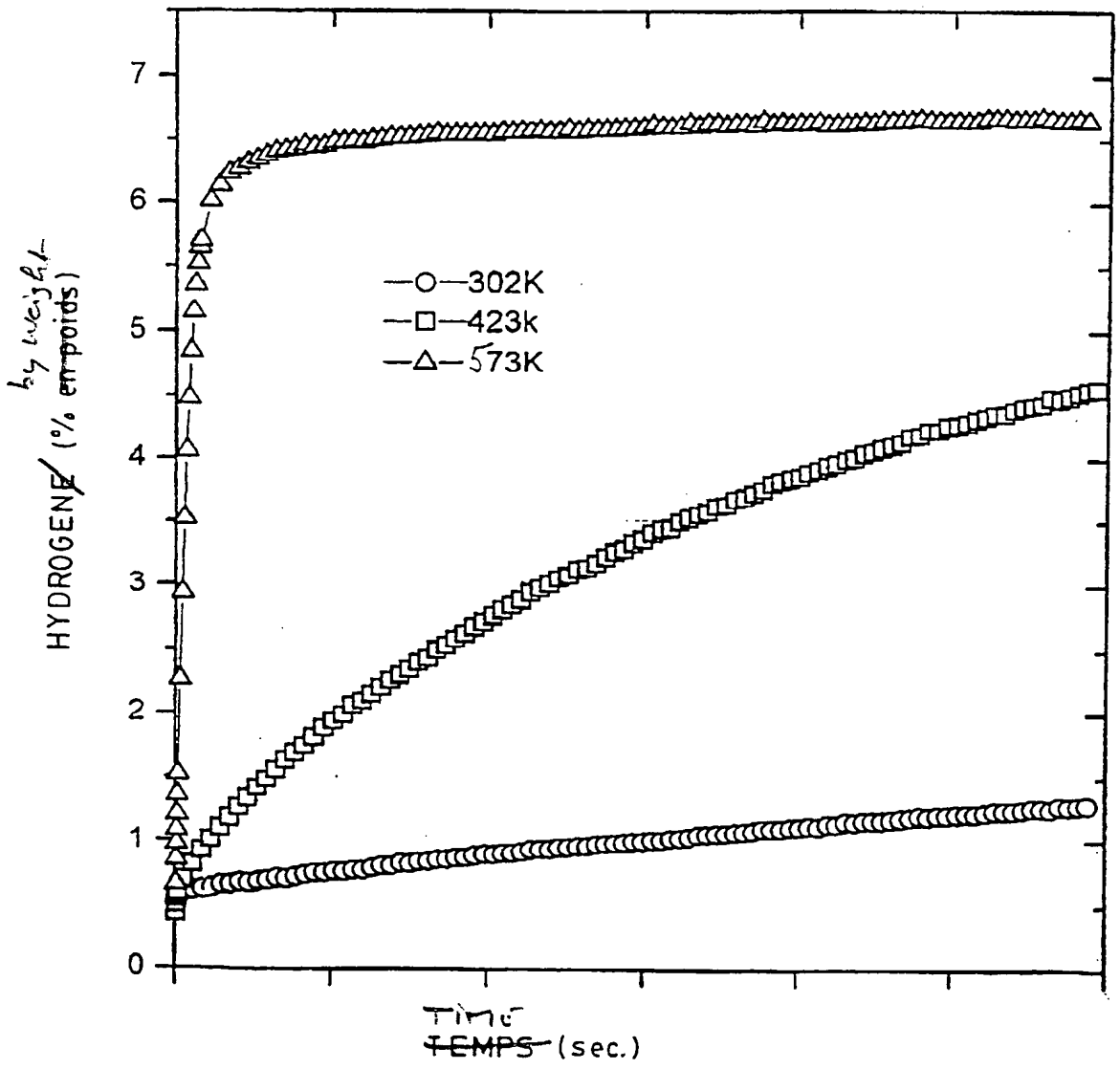


FIG. 35

MgH2 + 5 at % La ~~BROYE MECANIQUEMENT PENDANT~~ MECHANICALLY GROUND FOR 20h

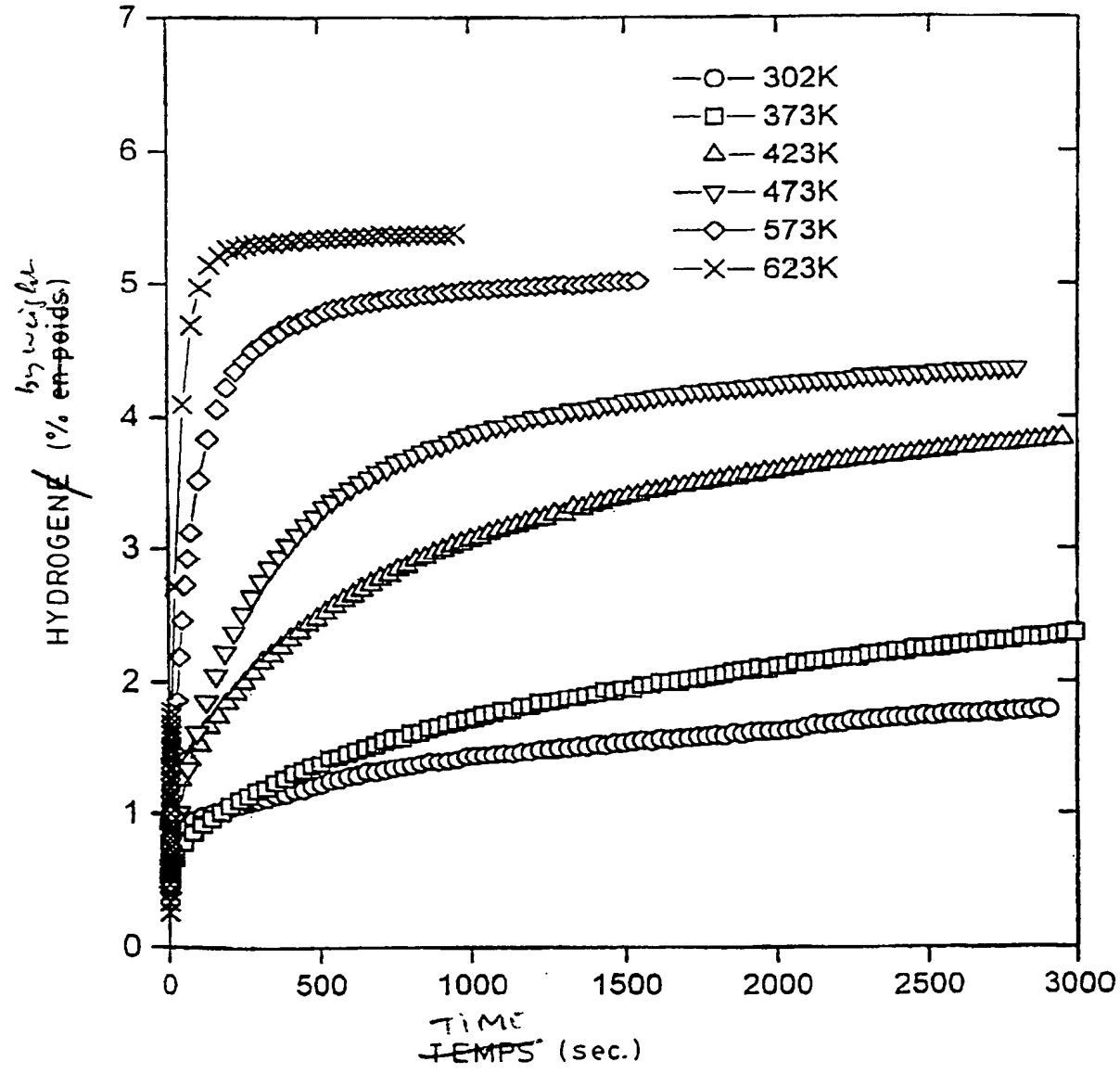


FIG. 36

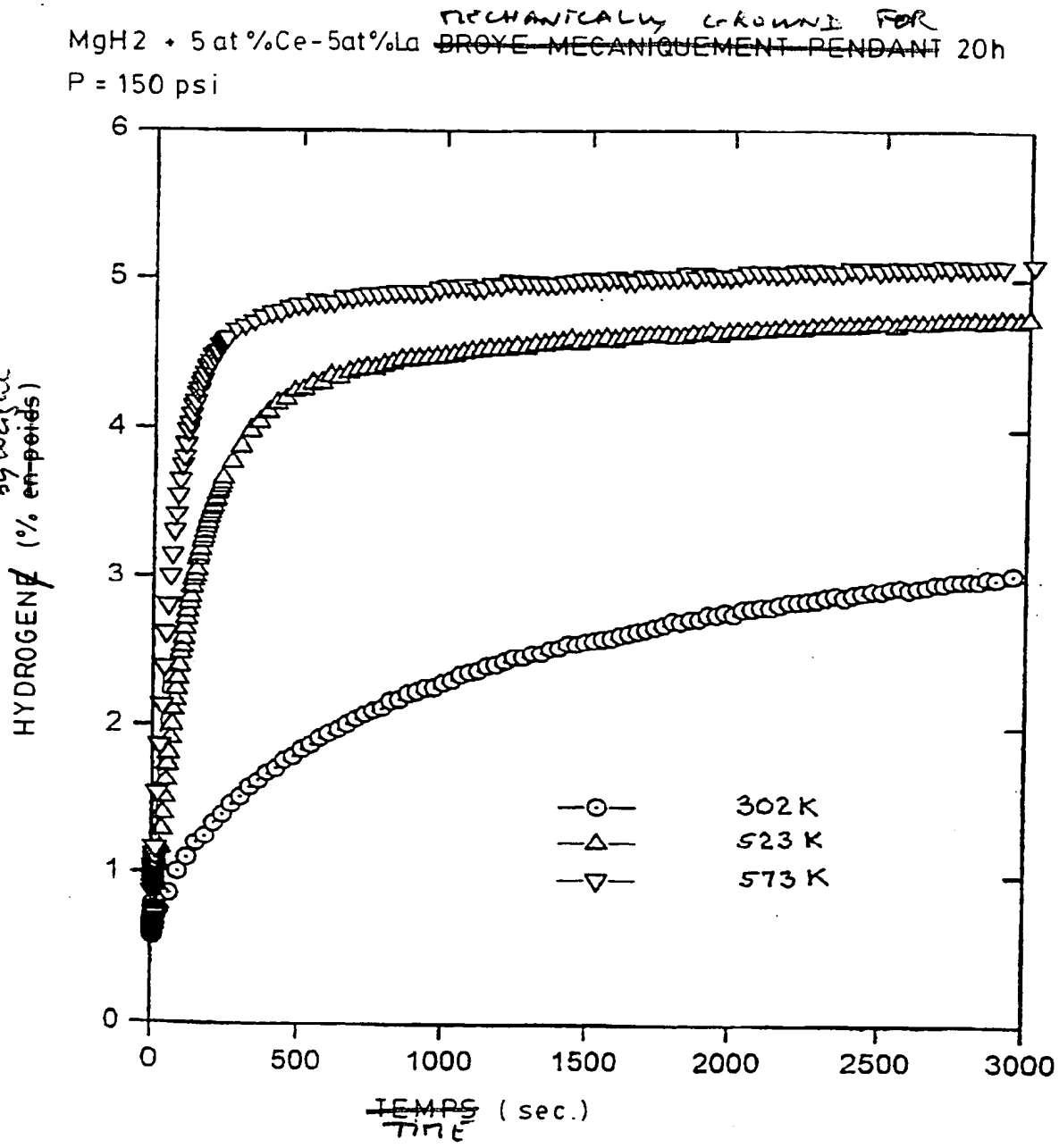

MgH2 + 5 at %Ce-5at%La MECHANICALLY GROUND FOR ~~BROYE MECANIQUEMENT PENDANT~~ 20h
P = 150 psi
HYDROGEN % (by weight) (% ~~en poids~~)
0
1
2
3
4
5
6
0
500
1000
1500
2000
2500
3000
~~TEMPS~~ TIME (sec.)
302 K
523 K
573 K

FIG. 37

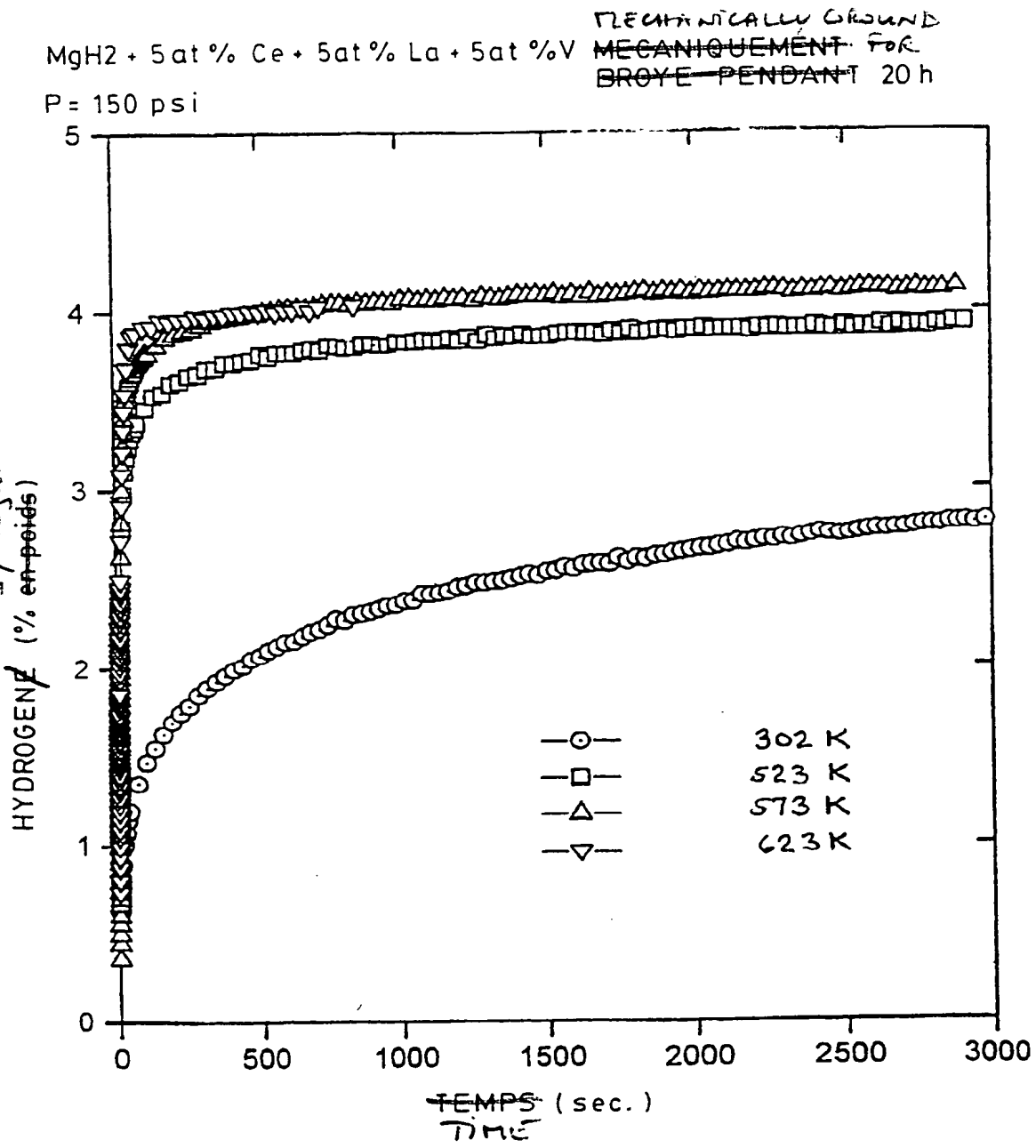

MgH2 + 5at % Ce + 5at % La + 5at %V MECHANICALLY GROUND ~~MECANIQUEMENT~~ FOR ~~BROYE PENDANT~~ 20 h
P = 150 psi
HYDROGEN by weight (% ~~en poids~~)
0
1
2
3
4
5
0
500
1000
1500
2000
2500
3000
~~TEMPS~~ TIME (sec.)
302 K
523 K
573 K
623 K

FIG. 38

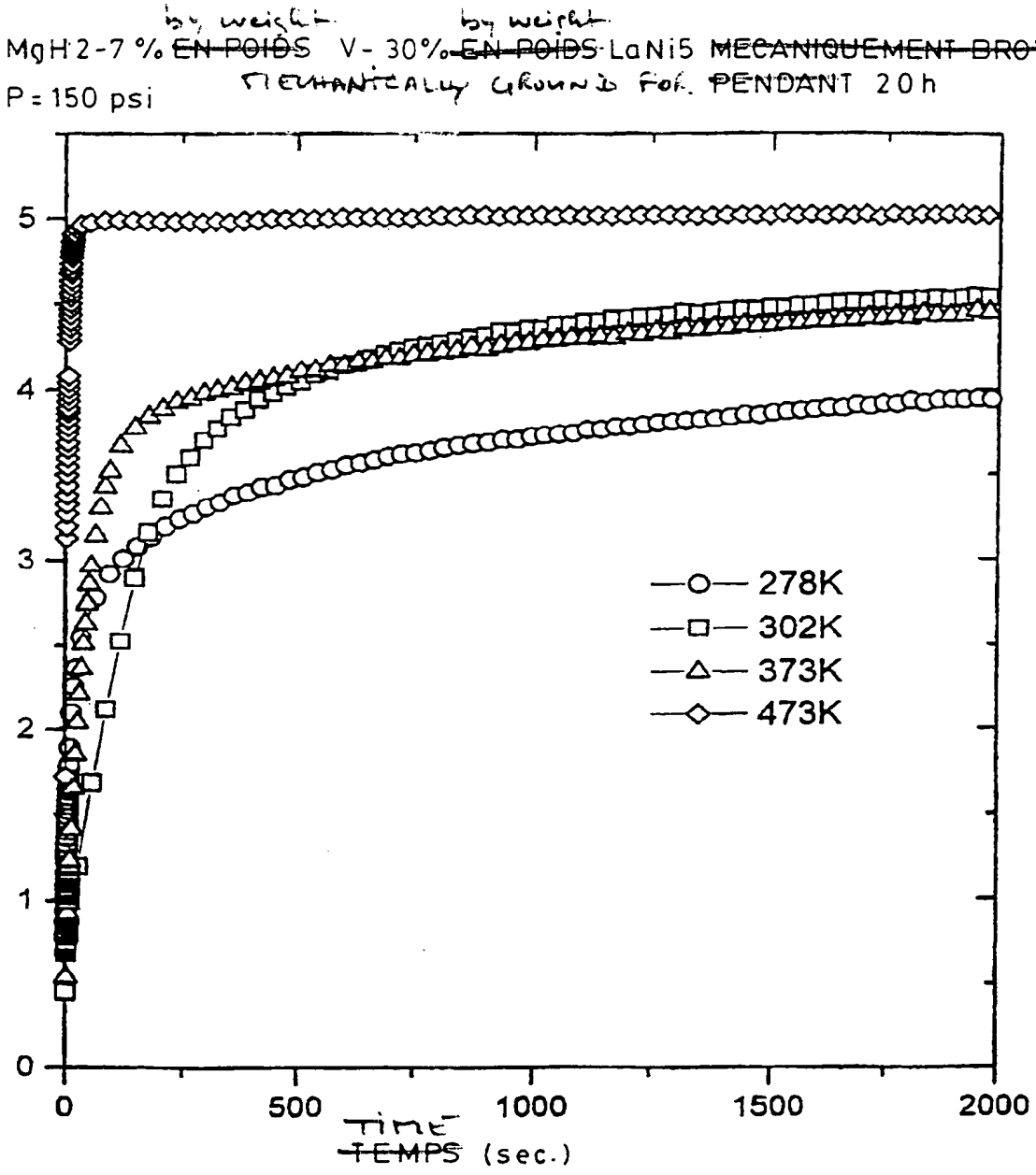


FIG. 39

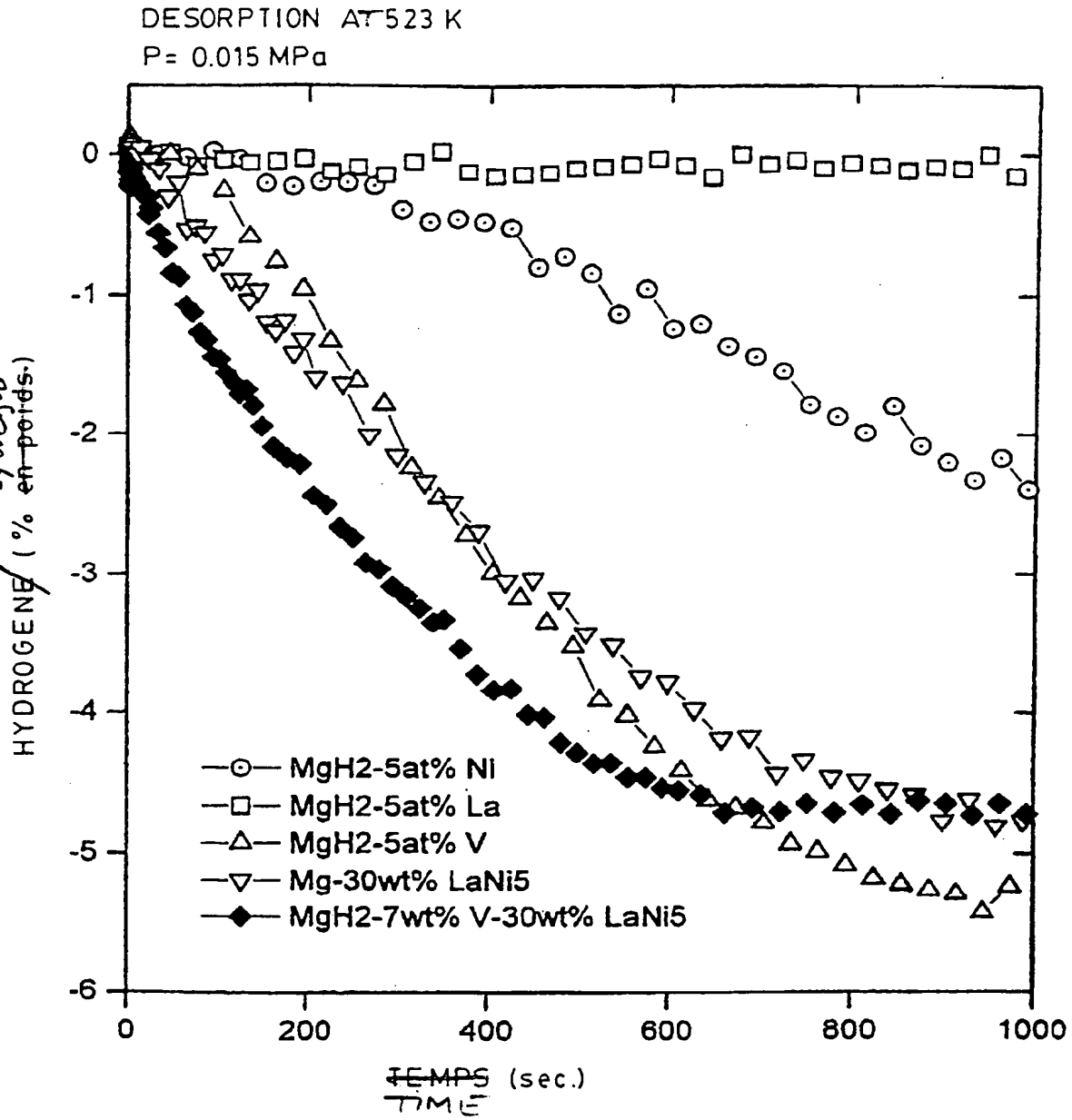

DESORPTION AT 523 K
P= 0.015 MPa
HYDROGENE (% by weight en poids.)
0
-1
-2
-3
-4
-5
-6
0
200
400
600
800
1000
TEMPS (sec.)
TIME
MgH2-5at% Ni
MgH2-5at% La
MgH2-5at% V
Mg-30wt% LaNi5
MgH2-7wt% V-30wt% LaNi5

FIG. 40